

**Manitoba Sustainable Development
Innovations Fund**

**Fonds des innovations de développement
durable Manitoba**

**Annual Report
2008-2009**

**Rapport annuel
2008-2009**

Manitoba 



MINISTER OF CONSERVATION

Legislative Building
Winnipeg, Manitoba, CANADA
R3C 0V8

The Honourable Philip S. Lee, C.M., O.M.
Lieutenant Governor of Manitoba
Government House
Winnipeg MB R3C 1S4

Your Honour:

I am pleased to present you with the Annual Report of the Sustainable Development Innovation Fund for the fiscal year ending March 31, 2009.

Respectfully submitted,

A handwritten signature in cursive script that reads "Stan Struthers".

Stan Struthers
Minister of Conservation





Manitoba



Deputy Minister of
Conservation

Legislative Building
Winnipeg, Manitoba Canada
R3C 0V8

The Honourable Stan Struthers
Minister of Conservation
330 Legislative Building
Winnipeg MB R3C 0V8

Dear Minister:

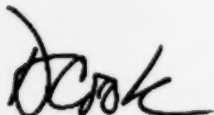
I am pleased to present you with the Annual Report of the Sustainable Development Innovations Fund (SDIF) for the 2008-2009 fiscal year.

Mandated under The Sustainable Development Act, the Fund's purpose is to contribute to Manitoba's environmental sustainability, while considering the economy, human health and social well-being. The Fund achieves its purpose through targeted funding initiatives and programs, implemented through an application or proposal process.

During 2008-2009, the SDIF awarded close to \$3.4 million for innovative projects and funded other significant initiatives that contributed to the province's environmental sustainability.

The Fund continues to be a major source of support to Manitoba communities, which benefit from research and studies, educational initiatives, technology development and application environmental improvements, and resource conservation and protection.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Don Cook".

Don Cook
Deputy Minister

Manitoba
spirited energy

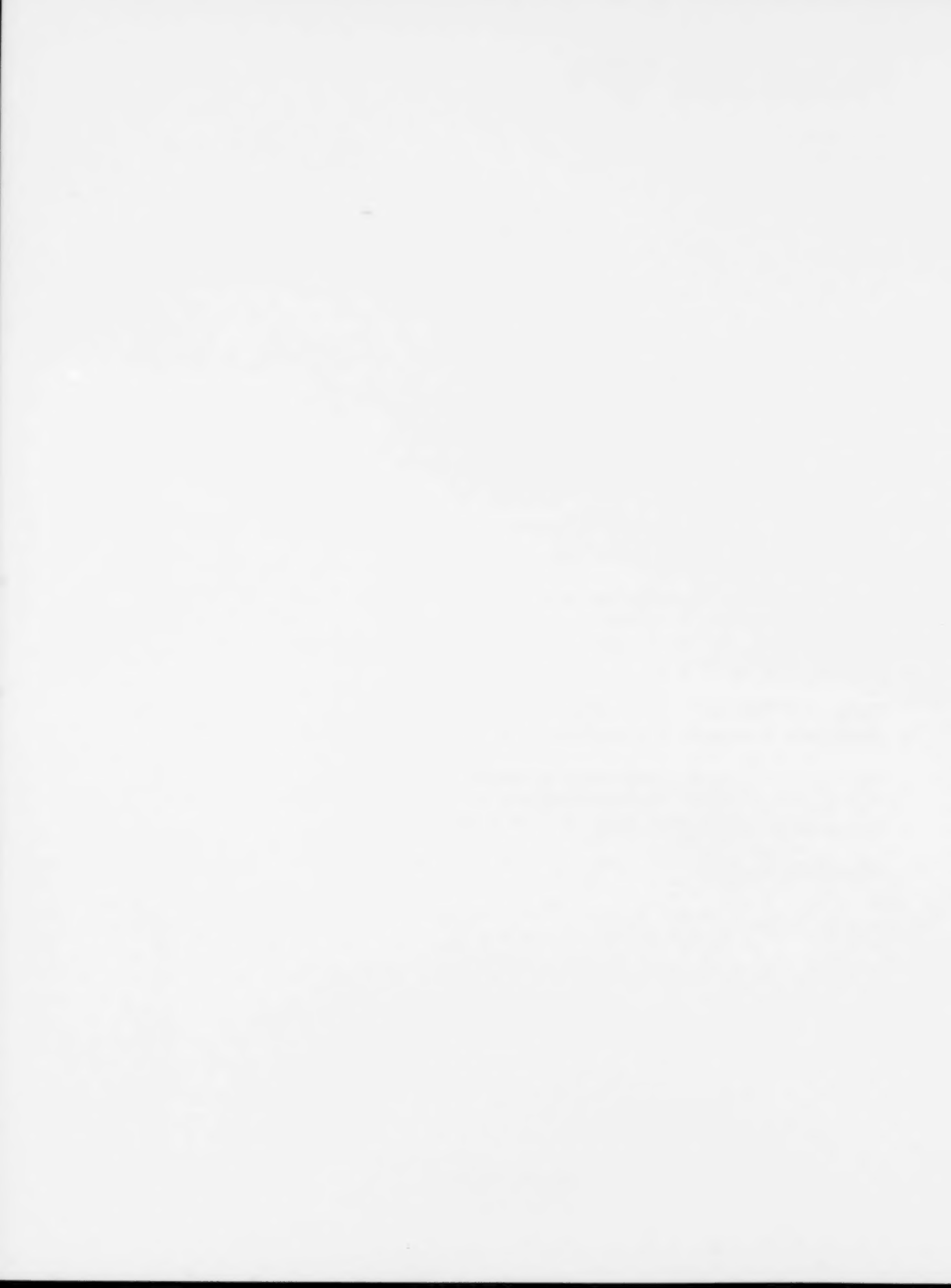


TABLE OF CONTENTS

<u>TITLE</u>	<u>PAGE</u>
PREFACE	3
NEW PROJECTS APPROVED DURING THE 2008/2009 FISCAL YEAR SDIF OPEN FUND CATEGORY:	
ECO-TOURISM	10
ECOSYSTEM CONSERVATION	13
ENVIRONMENTAL TECHNOLOGY INNOVATION AND DEMONSTRATION	17
NORTHERN COMMUNITY DEVELOPMENT AND ENVIRONMENTAL ISSUES	21
SUSTAINABLE AGRICULTURAL PRACTICES	24
SUSTAINABLE COMMUNITY DEVELOPMENT	31
UNDERSTANDING OUR ENVIRONMENT	43
SPECIAL INITIATIVES	57
BROAD ALLOCATIONS CATEGORY:	
- ENVIRONMENTAL YOUTH CORPS (EYC)	60
- MANITOBA CLIMATE CHANGE ACTION FUND (MCCAF)	68
- WASTE REDUCTION AND POLLUTION PREVENTION (WRAPP) FUND	72
- WATER STEWARDSHIP FUND - Zebra Mussel Program	81
- BEAR SMART INITIATIVE	89
- MANITOBA FORESTRY ASSOCIATION WOODLOT PROGRAM	91
APPENDIX I FIVE YEAR PROJECT SUMMARY	95

PREFACE

Organization of Report

The format of the 2008/2009 Sustainable Development Innovations Fund (SDIF) Annual Report is similar to previous Annual Reports in that funded projects are presented by category and program areas.

Projects are listed under the following categories:

SDIF Open Category:

- SDIF Open Category Priority Areas
- Special Initiatives

Broad Allocations Category:

Targeted Funding Initiatives are as follows:

- Environmental Youth Corps
- Manitoba Climate Change Action Fund
- Waste Reduction and Pollution Prevention Fund
- Water Stewardship Fund

Departmental and Government Strategic Priorities are as follows:

- Bear Smart Initiative
- Manitoba Forestry Association Woodlot Program

Purpose

In 1989, the provincial government created the Environmental Innovations Fund under *The Environment Act*. The Environmental Innovations Fund was repealed from the *Environment Act* in 1992/1993 and the Sustainable Development Innovations Fund (SDIF) was established under Section 17(1) of *The Sustainable Development Act*, which came into force on July 1, 1998.

As stated in *The Sustainable Development Act*, the purpose of the Fund, is to 'provide grants in support of innovative projects, activities, research and developments that further the sustainability of Manitoba's economy, environment, human health and social well-being and support environmentally sustainable economic growth; and support any other sustainable development innovation purpose that the Lieutenant Governor in Council considers necessary or advisable'.

The goal of the SDIF is to contribute to Manitoba's environmental sustainability. This approach indirectly takes into account the economy, human health and social well-being. The SDIF achieves its purpose through targeted funding initiatives and programs, implemented through an application or proposal process. The SDIF has two fund categories: an Open Fund Category and a Broad Allocations Category. Both categories and its designated programs align with Manitoba Conservation priorities, as well as other government initiatives. The SDIF supports Manitoba based projects or projects that will be of benefit to Manitoba and contribute to meeting the objectives of the SDIF:

1. To support and promote innovation in the environmental and sustainable development industries.
2. To encourage environmentally sound decisions and actions.
3. To promote research and demonstration of new initiatives not addressed by existing programs.
4. To stimulate economic development and diversification that will improve the quality of life, and strengthen community identity, throughout Manitoba.
5. To demonstrate new approaches to prevent waste and pollution, and conserve resources.
6. To support activities that may benefit both the global and local environment.

The two fund categories, SDIF Open Category and Broad Allocations Category, contribute towards the protection, enhancement, conservation, or rehabilitation of Manitoba's environment. Funding support is provided for the development, implementation and promotion of innovative environmentally sustainable projects delivered by local government and provincial government departments, business and industry, community and youth groups, Aboriginal organizations, First Nation communities and educational institutions.

As well as supporting special initiatives, the Open Category has established the following priority areas:

- environmental innovation and demonstration,
- ecosystem conservation,
- sustainable community development,
- northern community development and environmental issues,
- sustainable agricultural practices, and
- eco-tourism.

The Broad Allocations Category supports targeted funding initiatives and government strategic priorities, including:

- youth participation,
- waste reduction and prevention,
- climate change,
- water quality and conservation, and
- natural resource conservation.

Source of Revenue

The amount appropriated to the SDIF through the annual Estimates process is notionally linked to the anticipated revenues derived from Environmental Protection Taxes (EPT) on alcohol beverage containers and disposable diapers, from the Provincial Sales Tax (PST) on the Environmental Handling Charges (EHC) imposed by the Lubricating Products Industry, and from the Retail Sales Tax (RST) collected on levies applied to the sale of non-deposit beverage containers and tires.

Communication

The Fund is promoted through the following activities:

- Manitoba Government websites, including Manitoba Conservation, Manitoba Science, Technology, Energy and Mines, and Manitoba Water Stewardship
- Community events, trade shows, exhibitions, and speaking engagements
- Ministerial news releases
- Acknowledgement in publications, printed material, and signage of funded projects
- Listings in various funding directories
- Provincial government offices and staff
- Word of mouth.

Process and Fund Management

The Pollution Prevention Branch of Manitoba Conservation is designated as the administering branch for the Fund under *The Sustainable Development Act* and provides overall administrative support to the Fund, including the Open Category and Broad Allocations Category. This includes responding to inquiries, preparing documentation and reports, tracking expenditures, preparing cash flows, and reporting to Treasury Board.

The Branch also manages the SDIF Open Fund Category and two of the targeted funding initiatives under the Broad Allocations Category – Environmental Youth Corps (EYC) and Waste Reduction and Pollution Prevention (WRAPP) Fund.

The Manitoba Climate Change Action Fund (MCCAF) is managed by Manitoba Energy, Science and Technology and the Water Stewardship Fund, which includes the Zebra Mussel Program, is managed by Manitoba Water Stewardship. The remaining allocations under the Broad Allocations Category are managed by other Manitoba Conservation branches.

The SDIF Open Category and Broad Allocation Categories, including the Environmental Youth Corps (EYC), Manitoba Climate Change Action Fund (MCCAF), Waste Reduction and Pollution Prevention (WRAPP) Fund, and Water Stewardship Fund use a similar application or proposal process.

Applications or proposals submitted for funding consideration are evaluated by provincial staff against the funding program's criteria. The evaluations are compiled and summarized and then submitted for review to an Advisory Committee, comprised of representatives from provincial government departments.

The Advisory Committee reviews the proposals and the evaluations and makes funding recommendations to the Minister of Conservation or delegated Minister. The Minister has delegated approval authority for projects receiving funding of \$25,000 or less. Projects to be awarded funding in excess of \$25,000 are subject to Treasury Board approval.

Projects requesting support under the SDIF Open Category are assessed against the following criteria:

- addresses one or more of the priority areas;
- demonstrates measurable progress towards achieving one or more of the Fund's objectives;
- promotes a sustainable approach, has clear environmental benefits, and takes into account benefits to the community and the economy;
- involves youth;
- has written support and has identified other financial or in-kind project support;
- has a realistic budget and uses appropriate resources to conduct the project;
- has a distinct start and finish, and will be implemented in a timely fashion;
- will be conducted in Manitoba or benefit Manitoba;
- has a clear, concrete plan for future use, sharing, or replication.

Ineligible applications and funding requests under the SDIF Open Category include:

- projects that will result in proprietary knowledge which will be held exclusively by the grant recipient;
- applications for debt financing or cost recovery purposes;
- purchase of playground and recreational equipment;
- purchase of real property, including land, buildings or vehicles;
- ongoing administration and established operational budgets; and
- initiatives that must be undertaken as a result of a government order, such as removal of petroleum distribution systems, investigations, and remediation.

Manitobans are major beneficiaries of the Fund with the intended direct impact of the funded projects being on the natural environment. By supporting environmentally sound and sustainable practices, the Fund assists with facilitating behavioral changes of individuals, households, businesses and institutions.

During 2008/2009, a total allocation of \$3.4 million was authorized to support the SDIF for the following categories:

SDIF Open Category

Broad Allocations Category

1. Targeted Funding Initiatives

- Environmental Youth Corps (EYC)
- Manitoba Climate Change Action Fund (MCCAF)
- Waste Reduction and Pollution Prevention (WRAPP) Fund
- Water Stewardship Fund

2. Departmental and Government Strategic Priorities

- Bear Smart Initiative
- Manitoba Forestry Association Woodlot Program

In total, \$3.39 million was expended against an allocation of \$3.4 million. Ninety-three new projects and two special initiatives were allocated funding from the SDIF Open Category in 2008/2009, expending approximately \$1.6 million. New projects funded under the SDIF Open Category included ventures that focus on Aboriginal interests, youth programming, habitat protection, and scientific research and analysis. The six targeted broad allocations expended approximately \$1.79 million.

A summary of project expenditures under the Fund's Open Category and Broad Allocations Category is presented on the following pages.

SDIF OPEN CATEGORY SUMMARY — PRIORITY PROGRAM AREAS

Eco-tourism:

A total of \$62,500.00 was expended in 2008/2009 for four projects under the eco-tourism category. The projects approved under this category are initiatives that address ecosystem preservation, public education and economic opportunities through tourism with a priority on rural and northern communities.

Ecosystem Conservation:

A total of \$89,967.00 was expended in 2008/2009 for six projects under the ecosystem category. The objectives of this category are to conserve resources, preserve and maintain urban forests and ecosystems and rehabilitate and revitalize degraded areas.

Environmental Technology Innovation and Demonstration:

A total of \$125,000.00 was expended in 2008/2009 for six projects under the environmental technology innovation and demonstration category. Projects supported within this category include feasibility studies, research and development of new products and processes, environmental technology demonstrations, and special projects, such as strategic studies relating to industrial sectors.

Northern Community Development and Environmental Issues:

A total of \$124,911.00 was expended during the 2008/2009 fiscal year for four projects funded in the northern community development and environmental issues category. Projects under this category should reflect the enhancement of the environment and sustainable economic development activities of northern and remote communities, with a priority on Aboriginal communities.

Sustainable Agricultural Practices:

A total of \$231,142.35 was expended during the 2008/2009 fiscal year for fifteen projects under the sustainable agricultural practices category. Projects supported within this category include research, demonstration, and feasibility studies on agricultural practices that protect the environment and assist in diversifying Manitoba's agricultural sector.

Sustainable Community Development:

A total of \$317,130.00 was expended during the 2008/2009 fiscal year for twenty-eight projects under the sustainable community development category. Sustainable community practices include eco-efficiency initiatives, environmental stewardship, capacity building mechanisms, and encouragement of inner city revitalization, with an emphasis on partnerships with Aboriginal people and youth.

Understanding Our Environment:

A total of \$473,898.00 was expended during the 2008/2009 fiscal year for thirty projects under the understanding our environment category. Projects under this category help Manitobans make educated decisions and take action regarding the environment, through education and awareness activities, training, research, seminars and forums.

Special Initiatives:

Flin Flon Soil Improvement Project

A total of \$69,184.37 was expended during the 2008/2009 fiscal year to support soil improvement at Flin Flon parks. Soil improvements are intended as a precautionary measure for areas where children play while a human health risk assessment is completed. Initial work was undertaken at two sites.

Manitoba Tire Stewardship Program

A total of \$112,500.00 was expended during the 2008/2009 fiscal year to support the Off the Road (OTR) Tire Program, intended to eliminate the excess inventory of unprocessed scrap tires in Manitoba, and complete the transition to the new industry led program under Tire Stewardship Manitoba (TSM).

BROAD ALLOCATIONS CATEGORY SUMMARY

Targeted Funding Initiatives

Environmental Youth Corps:

A total of \$220,386.28 was expended during the 2008/2009 fiscal year for 104 projects funded through the Environmental Youth Corps (EYC) including program administrative costs. The EYC supports environment-related projects involving hands-on participation of youth throughout Manitoba that include water quality, waste minimization, protection of flora and fauna, rehabilitation and conservation of the natural environment, wildlife conservation and habitat preservation.

Manitoba Climate Change Action Fund:

A total of \$375,000.00 was expended during the 2008/2009 fiscal year for eight projects funded through the Manitoba Climate Change Action Fund (MCCAF). The priority areas within MCCAF include education and outreach, impacts and adaptation, technical innovation and energy efficiency.

Waste Reduction and Pollution Prevention (WRAPP) Fund:

A total of \$534,948.18 was expended during the 2008/2009 fiscal year for 23 projects funded through the Waste Reduction and Pollution Prevention (WRAPP) Fund including WRAPP program development. The priority areas within the WRAPP Fund include composting, construction and demolition (C&D) waste management, green procurement, institutional waste reduction, integrated waste management, market development, pollution prevention, promotion and education and regional recycling.

Water Stewardship Fund:

A total of \$345,861.42 was expended during the 2008/2009 for 17 projects under the Water Stewardship Fund, including the Zebra Mussel Program. The priority areas for project funding, under the Water Stewardship Fund, include watershed management planning and implementation, water-related scientific research, education and capacity building, water conservation, water quality and economic development.

Departmental and Government Strategic Priorities

Bear Smart Initiative:

A total of \$109,095.04 was expended during the 2008/2009 fiscal year to support the implementation of the Bear Smart Initiative in Manitoba which will assist in preventing human-bear conflicts.

Manitoba Forestry Association Woodlot Program

A total of \$200,000.00 was expended during the 2008/2009 fiscal year to support the Woodlot Program which encourages private landowners in Manitoba to use Agro-forestry and woodlot management practices to diversify farm income and maintain wildlife habitat.

Table 1: Summary of SDIF Open Category and Broad Allocation Projects

Project Categories	Number of Projects Allocated Funding in 2008/2009	Amount Expended
Open Fund Category		
Eco-tourism	4	\$62,500.00
Ecosystem Conservation	6	\$89,967.00
Environmental Technology Innovation and Demonstration	6	\$125,000.00
Northern Community Development and Environmental Issues	4	\$124,911.00
Sustainable Agricultural Practices	15	\$231,142.35
Sustainable Community Development	28	\$317,130.00
Understanding Our Environment	30	\$473,898.00
Special Initiatives	2	\$181,684.37
Total for Open Category	95	\$1,606,232.72
Broad Allocations Category		
1. Targeted Funding Initiatives		
Environmental Youth Corps (EYC)	104	\$220,386.28
Manitoba Climate Change Action Fund (MCCAF)	8	\$375,000.00
Waste Reduction and Pollution Prevention (WRAPP) Fund	23	\$534,948.18
Water Stewardship Fund ¹	17	\$345,861.42
2. Departmental and Government Strategic Priorities²		
Bear Smart Initiative		\$109,095.04
Manitoba Forestry Association Woodlot Program		\$200,000.00
Total for Broad Allocations Category		\$1,785,290.92
Total for SDIF	247	\$3,391,523.64

¹ The Water Stewardship Fund includes a funding sub-allocation for the Zebra Mussel Program.

² The Bear Smart Initiative and the Manitoba Forestry Association Woodlot Program activities are related to departmental and government priorities and do not award grants to project proponents.

ECO-TOURISM
PROJECTS ALLOCATED FUNDING
DURING THE 2008/2009 FISCAL YEAR
UNDER THE SDIF OPEN CATEGORY

Number of Projects: 4

Total Amount Expended: **\$62,500.00**

<u>Project Name</u>	<u>Total Expended</u>
Centre d'interpretation Saint-Leon, Year 3	\$10,000.00
Climate Change and Tourism: Making the Churchill Connection	\$25,000.00
Manigotagan River Web-based GIS, Year 3	\$7,500.00
Waabanong Anishinaabe Interpretive Centre – Feasibility Study	\$20,000.00

ECO-TOURISM

DETAILED LISTING OF PROJECTS ALLOCATED FUNDING DURING THE 2008/2009 FISCAL YEAR

CENTRE D'INTERPRETATION SAINT-LEON, YEAR 3

Proponent:	Centre d'interpretation Saint-Leon, Year 3
Date Approved:	March 31, 2009
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

Summary:

A grant of \$10,000.00 was approved for the third year of the interpretive centre's green tourism and marketing plan in Saint-Léon, Manitoba. The plan focuses on the area's unique environment featuring the salamander and its wetlands, and the existing wind energy farm. Phase three will focus on developing four galleries at the interpretative centre: Birds Gallery, Wind Power Gallery, Salamander Gallery, and Living Green Gallery. The galleries are intended to enhance the implementation and promotion of the centre's educational programming and interactive activities of the local ecosystem. A wind energy exhibit will be developed to complement existing exhibits including a live tiger salamander observation aquarium, and theatre area. An observation station will be constructed for wildlife viewing, and trees will be planted in partnership local community groups to create an ecologically friendly area.

CLIMATE CHANGE AND TOURISM: MAKING THE CHURCHILL CONNECTION

Proponent:	Destination Churchill
Date Approved:	September 25, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to support the development of an interpretative plan that will increase tourism operators, local residents', and visitors' awareness about climate change and its impacts on the northern environment. It is proposed that a number of educational workshops for tour operators and local residents will be held and interpretative products and website will be created. Churchill's dependence on tourism and its wildlife highlights the need to raise awareness about the impact of climate change on the area's wildlife and Arctic and sub-Arctic ecosystems by promoting sustainability, including the reduction of greenhouse gas emissions by providing practical tools, particularly regarding transportation and energy efficiency, and by increasing awareness about the impacts of climate change which may benefit both the local and global environment.

MANIGOTAGAN RIVER WEB-BASED GIS, PHASE 3

Proponent:	Manitoba Eco-Network Inc.
Date Approved:	September 25, 2008
Total Amount Approved:	\$7,500.00
Total Amount Expended:	\$7,500.00

Summary:

A grant of \$7,500.00 was approved to continue with the implementation of a pilot project to promote environmentally-sensitive use of the Manigotagan River, Manitoba newest provincial park, through the production of an interactive web-based map and paper map. As a pilot project, it is intended that an interactive web-based map, GIS and paper map will assist with trip planning and navigation and encourage a respectful attitude to the environment. Information will be provided on the local area and raise awareness of its history, ecosystems and conservation. Environmental and water pollution issues will be a recurring theme throughout the web portal and the interactive map will include an environmental/educational layer with quiz questions and other interesting environmental information. It is proposed that this tool will link geographic, written, audio and visual information and publishing the digital map on the internet will facilitate access to more local and foreign visitors, thus increasing tourism and economic benefits for the communities along the Manigotagan River and Manitoba in general.

WAABANONG ANISHINAABE INTERPRETIVE CENTRE-FEASIBILITY STUDY

Proponent:	Anishinaabe Elders Group
Date Approved:	November 27, 2008
Total Amount Approved:	\$ 20,000.00
Total Amount Expended:	\$ 20,000.00

Summary:

A grant of \$20,000.00 was approved to conduct a study to determine the feasibility of developing an interpretive, teaching, and environmental centre to be located near Hollow Water First Nation. It is proposed that an interpretive centre will assist in balancing economic development with cultural and ecological education efforts. The study will focus on site analysis, including environmental footprint and other implications; facility program development; cost implications, capital development, operations, and potential partners and revenue sources. Green technology options, sustainable environmental practices and technologies will also be considered as part of the process. The proposed centre intends to provide an educational experience on the ancient Aboriginal teachings of environmental stewardship and on the traditional Anishinaabe way of life. It aims to be a gathering place to engage and teach holistic and sustainable living to all peoples, as well as to provide opportunities for elders to pass along their environmental knowledge.

**ECOSYSTEM CONSERVATION
PROJECTS ALLOCATED FUNDING
DURING THE 2008/2009 FISCAL YEAR
UNDER THE SDIF OPEN CATEGORY**

Number of Projects: 6

Total Amount Expended: \$89,967.00

<u>Project Name</u>	<u>Total Expended</u>
Implementing Marsh Monitoring in Manitoba	\$20,000.00
Managing Urban Powerlines for Wildlife	\$12,500.00
Powerlines as Tall-Grass Prairies, Year 2	\$19,717.00
Restoration and Naturalization of l'Ile de Pollock Island	\$18,000.00
Risk Assessment Model for Provincial Woodland Caribou Ranges	\$9,750.00
Wabowden Woodland Caribou Genetics and Population Survey	\$10,000.00

ECOSYSTEM CONSERVATION

DETAILED LISTING OF PROJECTS ALLOCATED

FUNDING DURING THE 2008/2009 FISCAL YEAR

IMPLEMENTING MARSH MONITORING IN MANITOBA

Proponent:	Bird Studies Canada
Date Approved:	March 31, 2009
Total Amount Approved:	\$20,000.00
Total Amount Expended:	\$20,000.00

Summary:

A grant of \$20,000.00 was approved to conduct phase two of Bird Studies Canada's Prairie & Parkland Marsh Monitoring Program (PPMMP). The program will focus on habitat-based waterbird sampling to provide current information in support of habitat conservation programs. Currently no comprehensive program exists to assess the population status and habitat requirements for many species of waterbirds within prairie Canada. The overall goal is to develop spatially-explicit Decision Support System (DSS) models that will serve to direct efforts to conserve and manage habitats that are used by wetland-associated birds. Study sites will be established and comprehensive sampling in ecoregions of Manitoba, Saskatchewan, and Alberta that comprise the Prairie Habitat Joint Venture (PHJV) delivery area will be conducted. Information deficiencies will be addressed by linking the occurrence of wetland-associated migratory birds to habitat attributes at varying levels of spatial scale (i.e., marsh-specific to landscape-level habitat attributes). By collecting geographically extensive and statistically information on spatial variation in waterbird distribution, and linking this to finer scale species-habitat relationships, the project proposes to serve the PHJV in its efforts to conserve and manage habitats in this ecologically important region.

MANAGING URBAN POWERLINES FOR WILDLIFE

Proponent:	University of Manitoba, Natural Resources Institute
Date Approved:	March 31, 2009
Total Amount Approved:	\$12,500.00
Total Amount Expended:	\$12,500.00

Summary:

A grant of \$12,500.00 was approved for year three of a study of urban and rural grassland habitats along Manitoba Hydro rights-of-way (ROWs) and remnant prairies, focusing on an experimental component to distinguish the effects of mowing and spraying on prairie wildlife from the effects of urbanization. Abundance and species richness of butterflies, birds, arthropods, and prairie plants at sites with different management regimes and in different landscapes will continue to be surveyed. In addition, five normally-mowed and sprayed urban sites will be left unmowed for one year, and three normally-unmowed agricultural sites will be mowed twice. Changes in abundance and diversity of prairie plants and animals in experimental sites will be examined and compared to changes in prairie wildlife at control sites where mowing and spraying have not been adjusted. The results will assist in identifying the effects of mowing and spraying on prairie wildlife to be distinguished from the effects of urbanization, and will provide recommendations for management of ROWs and the creation of a wildlife habitat along these ROWs.

POWERLINES AS TALL-GRASS PRAIRIES, YEAR 2

Proponent:	University of Manitoba, Natural Resources Institute
Date Approved:	March 20, 2008
Total Amount Approved:	\$19,717.00
Total Amount Expended:	\$19,717.00

Summary:

A grant of \$19,717.00 was approved to undertake the second year of a research study to determine how and where to manage grassy open spaces under Manitoba Hydro utility rights-of-way (ROWs) as habitat for plants and butterflies that are associated with tall-grass prairies. The study will analyze abundances of at-risk prairie plants, adult butterflies, and resource plants from surveys along ROWs under different management regimes in urban, agricultural, and forested landscapes. It is proposed that butterfly and plant diversity will be lower along mowed ROWs dominated by exotic grasses, and that the diversity of both will increase as native prairie plant cover increases on ROWs. Much of the tall-grass prairie has been eliminated by conversion to agriculture and urban development, with approximately 1% of North America's tall-grass prairie and 0.1 % of Manitoba's tall-grass prairie remaining. Remaining tall-grass prairie habitat has been isolated by roads and invaded by encroaching forests and exotic plant species, and it is proposed that habitat loss is probably the primary cause of endangerment for species of tall-grass prairie butterflies and plants resulting in a demonstrated need to preserve or recreate tall-grass prairie habitats where possible. Therefore, as transmission-line or utility ROWs are kept clear of encroaching trees, these could be alternate sites where tall-grass prairie plants and butterflies could be re-established.

RESTORATION AND NATURALIZATION OF L'ILE DE POLLOCK ISLAND

Proponent:	Pollock Island Conservation Group
Date Approved:	July 15, 2008
Total Amount Approved:	\$18,000.00
Total Amount Expended:	\$18,000.00

Summary:

A grant of \$18,000.00 was approved to undertake activities to restore and naturalize l'île de Pollock Island, a 16 acre wildlife and natural environmental property, and establish it as an eco-park in the City of Winnipeg. The site's existing natural vegetation will be protected and preserved, with degraded areas restored with native vegetation and the site cleaned of litter and debris. Trees, shrubs, grasses and other vegetation will be planted to help alleviate bank erosion from the Red River and a tall grass prairie will be established. It is proposed that two elementary schools in the St. Norbert area will assist with planting of natural grasses and flowering plants and the site will be used as a living learning environment to teach students about the history and ecology of the land. The l'île de Pollock Island property is popular with walkers, birders, fishermen, naturalists and students. The site has been ecologically assessed by the City of Winnipeg, Naturalist Services Branch and defined as "high quality with high species diversity."

RISK ASSESSMENT MODEL FOR PROVINCIAL WOODLAND CARIBOU RANGES

Proponent:	Manitoba Model Forest Inc.
Date Approved:	January 8, 2009
Total Amount Approved:	\$9,750.00
Total Amount Expended:	\$9,750.00

Summary:

A grant of \$9,750.00 was approved to conduct a study to develop a formal model that assigns a level of risk to the boreal woodland caribou in Manitoba. Woodland caribou are an important species, primarily because of their species-at-risk status and their role as an indicator of forest health. Manitoba's woodland caribou recovery strategy assigns a level of concern (high, medium or low) to each of the 10 ranges in the province and action plans are being prepared on the basis of this ranked list of ranges. Unavoidable subjectivity of this system has generated some criticism of the process. Therefore, developing a more objective process will assist in determining whether risk designations are consistently applied. A framework to create a formal model will be developed to amalgamate data with a system of approximate reasoning. Risk data is expressed as a number from 0 to 100 and will be calculated using a wide range of inputs, including non-quantitative local expertise. The system will use data which possess all degrees of quantification, from very approximate verbal inputs (e.g. "lots of caribou" or "hardly any wolves") to very precise sample-based data gathered according to a formal design. Rather than using conventional mathematical equations, the system will express relationships according to rules which use linguistic variables (e.g. "If the wolf population is high, caribou mortality increases."). This will be the first time that this type of system will be used to assess risk in the context of wildlife management, particularly in relation to species at risk.

WABOWDEN WOODLAND CARIBOU GENETICS AND POPULATION SURVEY

Proponent:	Northeast Woodland Caribou Advisory Committee
Date Approved:	January 8, 2009
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

Summary:

A grant of \$10,000.00 was approved to conduct a study to determine the genetic relatedness and connectivity of the Wabowden woodland caribou range to adjacent provincial ranges. The Wabowden range is recognized as a medium risk range under Manitoba's Conservation's Recovery Strategy for Boreal Woodland Caribou. To date, genetic surveys have been completed on Manitoba's southern boreal woodland caribou populations to describe levels of genetic connectivity within and between neighbouring ranges. A genetic description of the Wabowden range and its relatedness to other provincial ranges is needed. In addition, information gathered will assist in assessing the level of effects of anthropogenic and natural disturbance that may inhibit gene flow. The Wabowden range is one of ten identified provincial ranges with an estimated population of 200 animals. However, this is not a systematically generated estimate but rather a subjective estimate derived from incidental observations made during previous radio telemetry monitoring. An initial genetics survey will confirm the genetic boundary of the Wabowden range required for conducting a population estimate survey in the winter of 2010/2011. A statistically valid population estimate will provide comparison with historical "best-guess" estimates and form the basis for long-term monitoring and future calculations of population growth rate.

**ENVIRONMENTAL TECHNOLOGY
INNOVATION AND DEMONSTRATION**

**PROJECTS ALLOCATED FUNDING
DURING THE 2008/2009 FISCAL YEAR
UNDER THE SDIF OPEN CATEGORY**

Number of Projects: 6
Total Amount Expended: \$125,000.00

<u>Project Name</u>	<u>Total Expended</u>
Phase 2 Solar Project-Solar Energy Data Tracking	\$15,000.00
Remote Wind Energy and Hybrid Energy Systems	\$10,000.00
Rural Municipality of Morris Wind Project	\$25,000.00
Sustainable Ammonia Nitrogen Removal from Concentrated Waste Streams Using the Anammox Process	\$25,000.00
Testing Kinetic Turbines for Distributed Generation	\$25,000.00
UMSAE Small Vehicle Test Facility	\$25,000.00

ENVIRONMENTAL TECHNOLOGY INNOVATION AND DEMONSTRATION

DETAILED LISTING OF PROJECTS ALLOCATED FUNDING DURING THE 2008/2009 FISCAL YEAR

PHASE 2 SOLAR PROJECT –SOLAR ENERGY DATA TRACKING

Proponent:	DLF Consulting
Date Approved:	November 27, 2008
Total Amount Approved:	\$15,000.00
Total Amount Expended:	\$15,000.00

Summary:

A grant of \$15,000.00 was approved to create an online real-time display of data generated by three solar energy systems installed at the University of Manitoba, and to provide an online calculator to estimate the value of a solar energy system. The initiative is intended to be a web-based electronic showcase of the performance of solar technology, making the solar energy data available to students and researchers.

REMOTE WIND ENERGY AND HYBRID ENERGY SYSTEMS

Proponent:	University of Manitoba, Department of Mechanical Engineering
Date Approved:	November 27, 2008
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

Summary:

A grant of \$10,000.00 was approved to install a 5 kW wind energy system as an off-grid demonstration of a remote community wind turbine at the University of Manitoba's Eco-Village. It is proposed that the wind energy system will generate electricity for off-grid applications and provide power for the Eco-Village, wind icing monitoring experiment, and a PHEV vehicle. The performance of the will be tracked and posted on a website for on-line monitoring. The study seeks to promote the use of wind energy technology in hybrid energy systems in Manitoba and serve as a demonstration project for educational purposes.

RURAL MUNICIPALITY OF MORRIS WIND PROJECT

Proponent: Rural Municipality of Morris
Date Approved: March 31, 2009
Total Amount Approved: \$25,000.00
Total Amount Expended: \$25,000.00

Summary:

A grant of \$25,000.00 was approved to showcase renewable energy technologies by demonstrating the effectiveness of integrating small wind turbine technology with geo-thermal heat pump installations. Wind turbines will be installed on the municipality's new public works garage in Rosenort, Manitoba. In addition, it is proposed that the turbines will be refined so that this green technology will be feasible for business and residential building applications. The wind turbines will provide partial power to the geo-thermal heat pump installation previously installed at the garage, in addition to reducing administration operating costs, and providing opportunities to export some additional power to Manitoba Hydro. The wind turbines are intended to help expand the public's knowledge and understanding of small wind technology, and highlight the municipality's commitment to sustainable community development.

SUSTAINABLE AMMONIA NITROGEN REMOVAL FROM CONCENTRATED WASTE STREAMS USING THE ANAMMOX PROCESS

Proponent: University of Manitoba, Department of Civil Engineering
Date Approved: November 27, 2008
Total Amount Approved: \$25,000.00
Total Amount Expended: \$25,000.00

Summary:

A grant of \$25,000.00 was approved for research to improve the system of autotrophic ammonium removal, using the anammox (anaerobic ammonium oxidation) process from streams containing high ammonia concentrations. This bench scale research seeks to address the issue of economically and environmentally sustainable removal of ammonia nitrogen from wastewater, considered an environmental priority due to its toxicity. The process offers total nitrogen removal in one step, and is intended to reduce the amount of greenhouse gas emissions when compared to conventional practices, as it does not require an external carbon source (usually a petrochemical), and will lead to the decrease of excess biomass production. The application may benefit conventional biological nutrient removal processes used in wastewater treatment plants, as it lowers total nitrogen concentration (ammonia and nitrates) without adding organic carbon.

TESTING KINETIC TURBINES FOR DISTRIBUTED GENERATION

Proponent: University of Manitoba, Department of Mechanical Engineering
Date Approved: November 27, 2008
Total Amount Approved: \$25,000.00
Total Amount Expended: \$25,000.00

Summary:

A grant of \$25,000.00 was approved to conduct testing of a kinetic underwater turbine that uses water flow currents to generate electricity in Manitoba river systems. Testing will be undertaken at the Pointe du Bois Hydro Kinetic test site, with a fabricated turbine that is submersible and better adapted to river conditions in Manitoba. The project intends to demonstrate the ability of kinetic turbines to provide continuous load power generation that can reduce environmental impacts by eliminating the need for dams and potential flooding of upstream lands, be rapidly deployed in remote communities, and present a low threat to fish and marine mammals.

UMSAE SMALL VEHICLE TEST FACILITY

Proponent:	University of Manitoba, Department of Design Engineering
Date Approved:	September 25, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to establish a laboratory and test facility for small hybrid technology vehicles. The facility is intended to allow the Faculty to increase collaboration with, and support to, the local emerging small hybrid vehicle industry, provide practical hands-on experience in hybrid technology for engineering students, and enhance students' participation in hybrid international competitions. It is expected that students' use of the facility and participation in hybrid international competitions will lead to the graduation of highly qualified, experienced engineers with the ability to direct and lead the expansion of hybrid technology. The facility will also be available for lease to the local small vehicle manufacturer industry for use in testing their vehicles.

**NORTHERN COMMUNITY DEVELOPMENT
AND ENVIRONMENTAL ISSUES**

**PROJECTS ALLOCATED FUNDING
DURING THE 2008/2009 FISCAL YEAR
UNDER THE SDIF OPEN CATEGORY**

Number of Projects: 4

Total Amount Expended: \$124,911.00

<u>Project Name</u>	<u>Total Expended</u>
Revitalizing Thompson's Nordic Ski Trails	\$25,000.00
Snow Lake Sustainable Community Plan	\$25,000.00
Standing Tree to Standing House	\$25,000.00
The Green Project: Building School and Community Capacity	\$49,911.00

**NORTHERN COMMUNITY DEVELOPMENT AND
ENVIRONMENTAL ISSUES**

DETAILED LISTING OF PROJECTS ALLOCATED

FUNDING DURING THE 2008/2009 FISCAL YEAR

REVITALIZING THOMPSON'S NORDIC SKI TRAILS

Proponent:	Thompson Cycle and Nordic Association
Date Approved:	March 31, 2009
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to help reclaim and widen existing trails of the Crolly Cross-Country Ski Trail system, improve the overall trail surface to promote multi-season use, and extend the trail system. The intent of the project is to create an outdoor recreational facility for skiing, mountain biking and trail running and promote a healthy and active lifestyle for residents and visitors alike. Construction of a new parking and trail access area is proposed as part of the overall trail enhancement.

SNOW LAKE SUSTAINABLE COMMUNITY PLAN

Proponent:	Town of Snow Lake
Date Approved:	July 15, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to assist in developing a Sustainable Community Plan. The Plan will seek to address short and long-term development options; the spatial requirements and site suitability for various land uses; an assessment of the environment; community services, facilities and infrastructure in relation to future needs; and options to meet those needs in a sustainable manner. The Plan is expected to assist in building community capacity to respond to unique needs and circumstances of northern-based communities and is intended to provide a model for other northern communities in addressing sustainability issues.

STANDING TREE TO STANDING HOUSE

Proponent:	Frontiers Foundation
Date Approved:	September 25, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to establish a community housing development strategy in four northern Aboriginal communities and help build capacity and skill development. The strategy intends to address the need to create more affordable, sturdy, healthy housing in the North, help build capacity and develop skills, and promote sustainable forest management practices. The First Nation Forestry program will assist in delivering training programs in sustainable selective harvesting, sawmilling, felling techniques, log and timbre-frame construction, and forest stewardship. Community based training options will also be explored with the University of the North.

THE GREEN PROJECT: BUILDING SCHOOL AND COMMUNITY CAPACITY

Proponent:	Flin Flon School Division
Date Approved:	September 25, 2008
Total Amount Approved:	\$49,911.00
Total Amount Expended:	\$49,911.00

Summary:

A grant of \$49,911.00 was approved to undertake a community based initiative to accelerate the reforestation and soil improvement in Flin Flon, Manitoba. In undertaking the "Green Project" the community and students will participate in field operations through the application of local crushed limestone and vegetation plantings. In addition, the initiative will be expanded to include a youth mentor component to further engage youth and community participation. The mentorship component will assist in developing youth leadership skills by promoting and facilitating greening activities and other local environmental stewardship initiatives.

SUSTAINABLE AGRICULTURAL PRACTICES

PROJECTS ALLOCATED FUNDING

DURING THE 2008/2009 FISCAL YEAR

UNDER THE SDIF OPEN CATEGORY

Number of Projects: 15

Total Amount Expended: \$231,142.35

<u>Project Name</u>	<u>Total Expended</u>
Biological Control of Root Maggots	\$20,000.00
Development of a Pocket Injector for Applying Liquid Manure in Forage Fields	\$22,000.00
Distilling Oils and Hydrosols from Non-Timber Forest Products	\$25,000.00
Educational Outreach-Organics in Manitoba	\$15,000.00
Holistic Management International Conference	\$5,000.00
Manitoba Farmer Appreciation Day	\$5,000.00
Manitoba Grazing School	\$5,000.00
Manitoba Obsolete Pesticide Collection Campaign	\$41,242.35
Manure Nutrient Movement from Crops	\$25,000.00
Organic Dairying Workshop	\$900.00
Pan Am Forest Gardens	\$5,000.00
Phosphorus Retention Capacity in Soil by Near-infrared Spectroscopy	\$10,500.00
Reducing Environmental Emissions in Swine Barns	\$25,000.00
The Investigation and Evaluation of Riparian Management Practices within the Manitoba Landscape	\$25,000.00
The Village Market 2008	\$1,500.00

SUSTAINABLE AGRICULTURAL PRACTICES

DETAILED LISTING OF PROJECTS ALLOCATED

FUNDING DURING THE 2008/2009 FISCAL YEAR

BIOLOGICAL CONTROL OF ROOT MAGGOTS

Proponent:	University of Manitoba, Department of Entomology
Date Approved:	November 27, 2008
Total Amount Approved:	\$20,000.00
Total Amount Expended:	\$20,000.00

Summary:

A grant of \$20,000.00 was approved for a three-year research project to determine the potential of introducing a biological control agent from Europe in controlling root maggots in canola. The agent, a beetle *Aleochara bipustulata*, would provide an alternative method to keep root maggot populations below damaging levels, reducing cost to producers, and alleviating the pressure for registration and widespread use of persistent insecticides. To permit introduction of an agent, a number of risk assessments are proposed, including the possibility that the agent might attack non-target species and reduce their populations and how the introduction of the agent could disrupt the existing natural biological control of the pest. Research is expected to contribute to the development of risk assessment methodology even if the proposed biological agent is rejected as a result of the assessments.

DEVELOPMENT OF A POCKET INJECTOR FOR APPLYING LIQUID MANURE IN FORAGE FIELDS

Proponent:	University of Manitoba, Department of Biosystems Engineering
Date Approved:	January 8, 2009
Total Amount Approved:	\$22,000.00
Total Amount Expended:	\$22,000.00

Summary:

A grant of \$22,000.00 was approved to develop and test a "pocket injector" for liquid manure injection in forage fields. Injection of liquid manure is proposed as an effective method to minimize odour emissions, nutrient losses, and surface runoff. A recently developed pulsing meter will be tested in field conditions to determine the pulsing meter's ability to release liquid manure in an intermittent flow (pulses) and act as a "pocket injector". The current method using rolling tines, creates holes or pockets on the soil surface and the manure can be left on the surface, causing odour, grass contamination, nutrient loss, and runoff pollution.

DISTILLING OILS AND HYDROSOLS FROM NON-TIMBER FOREST PRODUCTS

Proponent: North Forks Economic Development Authority
Date Approved: July 15, 2008
Total Amount Approved: \$25,000.00
Total Amount Expended: \$25,000.00

Summary:

A grant of \$25,000.00 was approved to expand the economic viability and knowledge of essential oils that are harvested from Manitoba's boreal forest. An essential oil distillation unit west of The Pas in the Carrot River Valley area will be installed and a distillation testing program undertaken. The distillation unit will provide opportunities for wild harvesters to add essential oil source materials to their raw products list. Once distillation testing has been completed, consideration will be given to manufacturing, diversification and retailing of boreal forest products utilizing essential oils.

EDUCATIONAL OUTREACH-ORGANICS IN MANITOBA

Proponent: Organic Food Council of Manitoba
Date Approved: January 8, 2009
Total Amount Approved: \$15,000.00
Total Amount Expended: \$15,000.00

Summary:

A grant of \$15,000.00 was approved to launch a two-year educational awareness and outreach campaign consisting of a series of workshops, seminars, tours and information booths at public venues. The intent of this project is to generate interest and increase educational awareness of local organic food, with the potential of increasing production and sales of local organic food, strengthening local markets and increasing food security. Various activities will highlight organic agriculture, including gardening, composting, soil stewardship, seed saving, local and regional food options, and preparation of local and seasonal recipes. In addition, urban and rural farms and gardens, processing and distributor facilities, restaurants, bakeries and retail outlets that make, supply and sell local organic foods will be toured.

HOLISTIC MANAGEMENT INTERNATIONAL CONFERENCE

Proponent: Manitoba Forage Council
Date Approved: September 25, 2008
Total Amount Approved: \$5,000.00
Total Amount Expended: \$5,000.00

Summary:

A grant of \$5,000.00 was approved to host an international conference at the Keystone Centre in Brandon, Manitoba to promote holistic management in agricultural practices. The conference will focus on education and awareness of farming practices that address ecosystem restoration and preservation. The conference proposes to address these issues, encourage environmentally sound decision making processes and actions, and promote sustainable agricultural practices. The event will assist farmers and others to establish long-term and biological plans and a monitoring program to assess progress.

MANITOBA FARMER APPRECIATION DAY

Proponent:	Manitoba Farm & Rural Stress Line
Date Approved:	September 25, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to host the First Annual Farmer Appreciation Day to recognize contributions made by Manitoba farmers. The event held in Brandon, Manitoba, is intended to recognize the vital role that farmers play in healthy communities, by increasing producers' knowledge about the important connections between individual health and wellness, the health of the farm, and the health of the environment. The event will showcase locally-produced, organic food, reusable plates and utensils, environmentally friendly print materials and packaging, and composting/recycling demonstration projects. A designated Green Corner will be established to demonstrate local group efforts in promoting the environmental preservation at a community level.

MANITOBA GRAZING SCHOOL

Proponent:	Manitoba Forage Council
Date Approved:	September 25, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to host a conference in Brandon, Manitoba on sustainable livestock management practices, with forage production and awareness of research and demonstration of agricultural practices as key priorities. Presentations will be provided on grazing technology and the forum will provide an opportunity for forage producers and grazers in Manitoba to exchange ideas and experiences. The conference hopes to encourage participants to engage in environmentally sound decision making processes and actions, new technology and initiatives that will benefit the local and global environment. The information gained by participants may be used to promote forage and grassland for soil and water conservation, biodiversity, as well as ecological sustainability of disturbed and fragile soils.

MANITOBA OBSOLETE PESTICIDE COLLECTION CAMPAIGN

Proponent:	CropLife Canada
Date Approved:	October 28, 2008
Total Amount Approved:	\$50,000.00
Total Amount Expended:	\$41,242.35

Summary:

A grant of \$50,000.00 was approved to safely collect and dispose of obsolete and unwanted agricultural pesticides, including "legacy" pesticides that are no longer registered for use in Manitoba. A province-wide collection program, targeted to agriculture producers, greenhouses, nurseries and golf courses was held from October 21-23, 2008. Twenty designated collection sites were set up across Manitoba and free collection and disposal was provided. The campaign was also intended to provide an opportunity to communicate with producers and reinforce messaging on the proper storage of pesticides and the reduction of pesticide waste.

MANURE NUTRIENT MOVEMENT FROM CROPS

Proponent:	Manitoba Livestock Manure Management Initiative
Date Approved:	September 25, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved for a three year study on the impact of nutrient leakage from production systems into the environment. The study will compare traditional liquid swine manure and solid manure production systems in combination with perennial and annual cropping systems on nutrient and pathogen loss from soils. Two nutrient application methods will also be compared, one that is based on nitrogen requirements and the other based on phosphorus requirements of plants. The study consists of a five-year rotation that will be run through two cycles and will measure the movement of water and nutrients in the soil. In addition, the quantity of nitrate and phosphorus that is lost via downward movement of water in the soil following application of solid versus liquid manures on different types of crops will be demonstrated to determine what risks may exist to water sources. The results from the study will be used to test, modify, calibrate and validate a nutrient cycling computer program that can be applied to other soils in Manitoba.

ORGANIC DAIRYING WORKSHOP

Proponent:	Manitoba Organic Milk Co-op Ltd.
Date Approved:	January 8, 2009
Total Amount Approved:	\$900.00
Total Amount Expended:	\$900.00

Summary:

A grant of \$900.00 was approved to host an Organic Dairying Workshop at the Richardson Centre for Functional Foods, based at the University of Manitoba campus. The intent of the workshop is to provide practical information and expertise on organic dairy production for organic producers and conventional producers exploring organic dairy production as a business opportunity. Topics to be discussed include: Transitioning land and animals from producers intending to dairy organically; management of the land – crop rotations, soil improvement, organic amendments; producing quality organic forage; feeding dairy cows organically; and troubleshooting problems on organic dairies. The workshop will assist in addressing producer concerns about land and livestock management and provide options for Manitoba producers to view organic production as an option in their operations.

PAN AM FOREST GARDENS

Proponent:	The Landless Farmers Collective
Date Approved:	January 8, 2009
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to create a demonstration garden site at the Pan Am Forest site. Working in partnership with the City of Winnipeg, an open space at the Pan Am Forest site will be converted into vegetable garden beds. The gardens will be constructed using permaculture design principles and the area will be developed into a more diverse ecosystem within the urban context. In addition, the site intends to create productive, aesthetically pleasing, and financially self-sustaining gardens while ensuring the grounds promote and demonstrate a locally based food production system. As well, a gardening design course and hands-on workshops will be developed with neighboring Grant Park High School.

PHOSPHORUS RETENTION CAPACITY IN SOIL BY NEAR-INFRARED SPECTROSCOPY

Proponent: PDK Projects, Inc.
Date Approved: March 31, 2009
Total Amount Approved: \$10,500.00
Total Amount Expended: \$10,500.00

Summary:

A grant of \$10,500.00 was approved to conduct a study to determine the feasibility of predicting the phosphorus retention index on soil samples using near-infrared spectroscopy (NIRS). The study aims to provide a rapid and cost-effective method for testing soil for phosphorus retention capacity, and could be used a guide to avoid the over-application of phosphorus and its subsequent loss to run-off for manure and fertilizer applications.

REDUCING ENVIRONMENTAL EMISSIONS IN SWINE BARNs

Proponent: Manitoba Livestock Manure Management Initiative
Date Approved: November 27, 2008
Total Amount Approved: \$25,000.00
Total Amount Expended: \$25,000.00

Summary:

A grant of \$25,000.00 was approved to conduct a three-year study to assess various measures established to address emission of gases and odour from swine operations, including the effects of diet manipulation, manure pH adjustment, oil sprinkling, and intensive cleaning and management. The study will address the gap in translating the study results observed to the actual reduction of personal exposure of workers to various contaminants throughout a workday. The study will take place at the Prairie Swine Centre facility near Saskatoon, Saskatchewan, and will be modified to comply with Manitoba regulatory requirements for workplace health and safety so that the resulting technologies may be adopted in Manitoba. Emission of gases and odour from swine operations is a continuing concern for the livestock industry as this can pose a risk to the health and safety of barn workers, can cause negative impact on the environment, and may create a serious nuisance to communities surrounding livestock operations.

THE INVESTIGATION AND EVALUATION OF RIPARIAN MANAGEMENT PRACTICES WITHIN THE MANITOBA LANDSCAPE

Proponent:	Manitoba Conservation Districts Association
Date Approved:	July 15, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved for a study to evaluate riparian management practices within Manitoba. Two beneficial management practices (BMPs) involving off-stream watering systems and grassed buffer strips will be examined and evaluated, providing opportunities to observe practices which examine water quality and obtain further scientific evidence on managing nutrients for Manitoba's ground water and surface water. Off-stream watering systems were designed as a means of encouraging cattle to stay away from streams and sensitive riparian areas. Several sites will be selected to examine the use of off-site watering systems adjacent to an area where no off-stream watering was provided. Data will be collected on cattle drinking behaviour and performance, the health of the stream bank and riparian areas, and forage and soil qualities in the areas near the off-stream water source. Grassed buffer strips are often recommended as a management practice for protecting and improving water quality by filtering non-point source pollutants found in-field runoff (e.g. sediments, nutrients, bacteria, and pesticides). Water flowing into and through harvested and un-harvested buffer strips will be collected and analyzed for nutrients and sediments.

THE VILLAGE MARKET 2008

Proponent:	Osborne Village Cultural Centre
Date Approved:	September 25, 2008
Total Amount Approved:	\$1,500.00
Total Amount Expended:	\$1,500.00

Summary:

A grant of \$1,500.00 was approved to establish a community market and gathering place that is intended to encourage a connection between food producers and consumers, residents within the neighbourhood, business, and local organizations. As a local community-based initiative, the intent is to address the rising cost of food, fuel and travel, and help to promote buying and eating locally, thereby minimizing reliance upon environmentally unsustainable energies. Waste minimization activities, such as composting, recycling and plastic bag reduction will be incorporated as part of the market's operations. This new community market and gathering place, to be located at the Gas Station Theatre in Winnipeg, Manitoba will be open to producers and artisans who reside or grow their food within a 100 mile area of Winnipeg.

SUSTAINABLE COMMUNITY DEVELOPMENT

PROJECTS ALLOCATED FUNDING

DURING THE 2008/2009 FISCAL YEAR

UNDER THE SDIF OPEN CATEGORY

Number of Projects: 28

Total Amount Expended: \$317,130.00

<u>Project Name</u>	<u>Total Expended</u>
Aboriginal Youth Capacity Building Initiative	\$4,000.00
Argyle's Outdoor Educational Classroom	\$5,000.00
CarShare Feasibility Study	\$10,000.00
Charles Sinclair School Outdoor Education	\$10,000.00
Communication and Educational Platforms for Community and Allotment Garden Sites	\$5,000.00
Garden Hill Community Trail Project	\$10,000.00
Geospatial Inventory of Traditional Medicinal Species in Southwest Manitoba	\$24,925.00
Growing Together in West Broadway	\$15,000.00
John M. King School Re-Development Project	\$5,000.00
Municipal Planning Guidelines for Wind Energy	\$8,000.00
Naa-Kah-Chee-Toon Youth Summer Project	\$10,000.00
Needle Drop Boxes	\$18,900.00
New Era Community Schools Garden	\$2,000.00
Outdoor Education and Industrial Arts Project Based Learning Program	\$2,480.00
Pathways to Sustainability	\$25,000.00
Peguis Traditional Land Use Study	\$25,000.00

<u>Project Name</u>	<u>Total Expended</u>
Re-Connecting to the Land	\$5,000.00
Sonics and Sojourns Fall Festival	\$5,000.00
Spence Greenhouse Development Phase 1	\$15,000.00
St. Charles Growing Together	\$5,000.00
St. Theresa Point Sandy Bar Site and Trail Project	\$10,000.00
Swan Lake First Nation Community Lands Information and Research Project	\$25,000.00
Transportation Cycling Conference	\$5,000.00
Tribal Environmental Awareness Conference 2008	\$5,000.00
University and Community Green Corridor	\$25,000.00
Urban Aboriginal Peoples Study	\$10,000.00
WECC Parking Plaza	\$15,000.00
Weed Waste Disposal: In Search of a Sustainable Alternative	\$11,825.00

SUSTAINABLE COMMUNITY DEVELOPMENT

DETAILED LISTING OF PROJECTS ALLOCATED

FUNDING DURING THE 2008/2009 FISCAL YEAR

ABORIGINAL YOUTH CAPACITY BUILDING INITIATIVE

Proponent:	Manitoba Commercial Inland Fishers Federation
Date Approved:	March 20, 2008
Total Amount Approved:	\$4,000.00
Total Amount Expended:	\$4,000.00

Summary:

A grant of \$4,000.00 was approved to develop and implement an Aboriginal Youth Capacity Building Strategy focusing on the needs of the inland fishing sector and impacts of this resource on Aboriginal communities. The sustainability of the inland fisheries sector will be examined to determine how to improve the quality of the inland fisheries in relation to partnerships and programs and to develop effective capacity building and mentoring mechanisms for Aboriginal youth. In addition, workshops will be conducted and meetings held to discuss issues affecting inland fisheries and resource users in Manitoba.

ARGYLE'S OUTDOOR EDUCATIONAL CLASSROOM

Proponent:	Argyle Alternative High School
Date Approved:	March 31, 2009
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to enhance the school's outdoor classroom program with a hydroponics system, wind turbine and solar heating system. Students will participate in a variety of hands-on activities conducting experiments and collecting data on climate change, growing plants and renewable energy. Activities and results will be documented and posted on-line to share with others. The program will address a number of learning curriculum outcomes, and engage the students and community in topics that include aboriginal culture, sustainability, environmental issues and concerns, renewable energy sources, and weather.

CARSHARE FEASIBILITY STUDY

Proponent:	SPARK: Igniting a Winnipeg CarShare
Date Approved:	March 20, 2008
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

Summary:

A grant of \$10,000.00 was approved for a feasibility study to evaluate and determine the viability of establishing a carshare program for Winnipeg, Manitoba. The study will consider various operational carshare programs tried elsewhere, critical factors or key elements needed for a program of this nature to be successful and which Winnipeg neighbourhood(s) would be best suited to pilot this initiative. Carshare programs are considered to be a practical alternative to assisting people in meeting transportation needs, as they allow for use of a vehicle when needed, without the costs and responsibilities of ownership.

CHARLES SINCLAIR SCHOOL OUTDOOR EDUCATION

Proponent:	Charles Sinclair School
Date Approved:	July 15, 2008
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

Summary:

A grant of \$10,000.00 was approved to secure a site on the school grounds of Fisher River Cree Nation and introduce traditional skills and values into the outdoor education program. The program seeks to instill positive values and assist in developing leadership and capacity building skills. The school has been delivering a Native Studies program for the past 10 years and has recently added an outdoor education program to the junior and senior high portion of the school. Curriculum and activities will be developed to engage students from grades 10 to 12 that will focus on "Community Studies". Students from grades 1 to 3 will participate in "Planting the Seed" and grades 4 to 6 will be involved in "Skill Development" activities.

COMMUNICATION AND EDUCATIONAL PLATFORMS FOR COMMUNITY AND ALLOTMENT GARDEN SITES

Proponent:	City of Winnipeg, Parks and Open Space Division
Date Approved:	March 31, 2009
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to enhance existing and potential community garden sites and strengthen community dialogue and public engagement. Community bulletin boards at each site will be installed and will offer information on sustainable growing practices, and other information on the garden and its membership. In addition a map of the site with a plot numbering system, garden locations, and events being held throughout the city will be posted. Space for permanent postings behind a lockable window and temporary postings on open corkboard will be made available on the bulletin boards for all gardeners and area residents to promote or discuss gardening topics. Murals will be painted on the back of the bulletin boards by area youth.

GARDEN HILL COMMUNITY TRAIL PROJECT

Proponent: Garden Hill Health Directorate
Date Approved: July 15, 2008
Total Amount Approved: \$10,000.00
Total Amount Expended: \$10,000.00

Summary:

A grant of \$10,000.00 was approved to develop a network of community walking trails linking community centres with local schools. The trails will be used to promote and support community-based programming addressing physical activity, health, culture, sport and environmental awareness. In addition, various locations along the trail will be cleared for environmental and cultural education activities. Vegetation will be planted along the trail, and local materials, such as chipped wood will be used for the trail surface, and a composting demonstration site will be established to showcase how waste materials can be turned into a productive resource. In addition, community workshops on composting will be held, which will assist in furthering the promotion and implementation of sustainable agricultural practices in support of family vegetable gardening, and berry cultivation activities.

GEOSPATIAL INVENTORY OF TRADITIONAL MEDICINAL SPECIES IN SOUTHWEST MANITOBA

Proponent: Assiniboine Community College
Date Approved: September 25, 2008
Total Amount Approved: \$24,925.00
Total Amount Expended: \$24,925.00

Summary:

A grant of \$24,925.00 was approved to conduct an inventory of Aboriginal medicinal land bases in southwestern Manitoba and help Aboriginal communities make informed decisions on sustainable management practices. Geomatics technology will be used to provide a spatial means to document medicinal lands, and the medicinal grounds will be mapped to allow Aboriginal communities to effectively manage, conserve and protect medicinal plant species that have been used for many generations. The study area will be centered on Spruce Woods Provincial Park. Locations will be documented and photographed, and specimens will be collected to provide materials for classroom learning. Information gathered will be used as curriculum materials for school programs. The long term goal is to develop electronic and printed resource materials.

GROWING TOGETHER IN WEST BROADWAY

Proponent: West Broadway Development Corporation
Date Approved: March 31, 2009
Total Amount Approved: \$15,000.00
Total Amount Expended: \$15,000.00

Summary:

A grant of \$15,000.00 was approved to develop a comprehensive plan for green spaces and environmental activities focusing on sustainable living in an urban environment. Various community activities that focus on inner city revitalization, including outreach and communications, river trail development, and urban agriculture will be implemented. It is proposed that a stewardship committee will be created in partnership with area residents and the Winnipeg Trails Association to develop a neighbourhood river trail plan. Partnerships will also be formed with the Landless Farmer's Collective to mentor community members on the organic SPIN (Special Plot Intensive Farming) Program. To increase community participation rates in greening activities, residents will be provided a map of green spaces, community gardens and community compost sites.

JOHN M. KING SCHOOL RE-DEVELOPMENT PROJECT

Proponent:	John M. King School
Date Approved:	July 15, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to beautify the school ground with trees and shrubs to create a more natural park-like setting. Greening the school grounds is expected to create a more vibrant, stimulating and safe environment and multi-use area for the school and community.

MUNICIPAL PLANNING GUIDELINES FOR WIND ENERGY

Proponent:	Manitoba Intergovernmental Affairs, Community Planning Services
Date Approved:	September 28, 2007
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$8,000.00
Total Amount Projected:	\$2,000.00 (FY 2009/2010)

Summary:

An allocation of \$10,000.00 was approved to determine local land use policies and develop standards regarding potential wind power projects to guide Manitoba municipalities and planning districts. The lack of this information has resulted in regulatory uncertainty for landowners and industry, as well as public concern respecting the possible impacts of wind power development. The project will help build the capacity of Manitoba municipalities and planning districts to respond to the interests and concerns of landowners, residents and industry and ensure that wind power development can occur in an efficient manner, while avoiding unacceptable land use conflicts.

NAA-KAH-CHEE-TOON YOUTH SUMMER PROJECT

Proponent:	Pine Creek Anishinabeh
Date Approved:	July 15, 2008
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

Summary:

A grant of \$10,000.00 was approved to develop and implement a nine-week training program to educate students on sustainable economic development, environmental stewardship, and eco-tourism. Youth will be provided opportunities to interact with community elders and participate in the community development process. At the conclusion of the training program, youth will present their findings to the community. The training program is intended to enhance the students' personal growth, their exposure to real life efforts, and develop capacity building skills.

NEEDLE DROP BOXES

Proponent:	Winnipeg Regional Health Authority, Population & Public Health
Date Approved:	November 27, 2008
Total Amount Approved:	\$18,900.00
Total Amount Expended:	\$18,900.00

Summary:

A grant of \$18,900.00 was approved for a pilot project to decrease the number of inappropriately discarded needles in Winnipeg by installing drop boxes in public outdoor areas where discarded needles are often found. The proposed drop boxes are intended to be safe and durable for unsupervised outdoor settings. Improper disposal of needles and syringes are a concern as discarded needles pose a potential risk of transmitting disease and infection to the general public. A safe and appropriate public needle disposal options will provide a community-based solution to addressing public concern, as not all needles discarded in public places get into the appropriate needle retrieval systems. Drop boxes have been beneficial in keeping used needles off city streets in other large Canadian cities.

NEW ERA COMMUNITY SCHOOLS GARDEN

Proponent:	New Era Community Schools Partnership Initiative
Date Approved:	March 6, 2009
Total Amount Approved:	\$2,000.00
Total Amount Expended:	\$2,000.00

Summary:

A grant of \$2,000.00 was approved to undertake a community school gardening project to educate students, staff, and the community regarding the virtues of organic, local and urban agriculture, environmental stewardship, and food security issues. Students will learn about health, social, economic, and environmental issues concerning food, discover urban food growing, and develop a sense of ownership and stewardship. A garden coordinator will collaborate with teachers in developing lesson plans for each grade, using the garden and the topic of food as the medium for lesson delivery. The project is also expected to benefit the school breakfast and lunch program's nutritional programming, in addition to using garden produce for cooking classes and food preservation sessions.

OUTDOOR EDUCATION AND INDUSTRIAL ARTS PROJECT BASED LEARNING PROGRAM

Proponent:	George Knott School
Date Approved:	January 8, 2009
Total Amount Approved:	\$2,480.00
Total Amount Expended:	\$2,480.00

Summary:

A grant of \$2,480.00 was approved to promote sustainable learning in the school by developing and implementing a project based learning program that integrates outdoor education, industrial arts, science, mathematics, and language arts using local environmental resources for Senior 1 students. Teachers, Elders and volunteers from the Wasagamack community will form a working group to create and implement new programming that focuses on the investigation of real life research questions and creating solutions to real problems from the student's own environment. Students will participate in the planning of the methodology for each study, brainstorm questions and formulate problems to be addressed and activities to be undertaken. Teachers will correlate student outcomes and integrate them into the Manitoba Curricula. Elders will provide guidance and instruction on traditional methods of harvesting, tool making, resource management, and native language instruction.

PATHWAYS TO SUSTAINABILITY

Proponent:	Rivers West
Date Approved:	March 31, 2009
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to conduct a three-year Pathway to Sustainability project to enable Winnipeg communities to prominently position pathways, walking and cycling routes as an important component of sustainable community development. Through a series of initiatives and working with neighbourhoods, citizen groups, outside agencies, volunteer groups and governments, the project proposes to develop a connected network of pathways as a foundation to community efforts to achieving environmental, social and economic sustainability. Events, forums and conferences will be organized to help build awareness of environmental benefits of increased pathway usage and encourage lifestyle change and expansion of transportation options. These initiatives are expected to help address Winnipeg's pathway development concerns and bring needed environmental benefits to communities, including improved physical infrastructure, reduced air pollution brought by transportation alternatives, addressing of health issues by encouraging physical activity, and provision of safe places for outdoor recreation.

PEGUIS TRADITIONAL LAND USE STUDY

Proponent:	Peguis First Nation
Date Approved:	November 27, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to conduct a traditional land use area study to identify the community's resources including landmass, traditional livelihood and traditional ecological knowledge. The study will assist in building community awareness and capacity for sustainable community development and environmental stewardship. In addition, a traditional outdoor education program at the school has been developed and the knowledge and mapping data gathered will be utilized as part of the education program. Elders working groups will be created as an information resource for the study, and students will assist in collecting data through questionnaires, interviews, elders gathering and sharing circles, as well as using GPS/GIS technology to assist in creating the mapping system. Traditional ecological knowledge from the elders, medicine gatherers, traditional hunters and trappers will be integrated in a final report and a map.

RE-CONNECTING TO THE LAND

Proponent:	Joe A. Ross School
Date Approved:	March 20, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to create an outdoor classroom within a traditional land-use area at Opaskwayak Cree Nation. Senior outdoor education students examined their local environment and made recommendations for environmental enhancements on the school grounds and in the community. The traditional land-use area for the outdoor classroom was surveyed by students and a location that had close proximity to the school, the main road, and the community parking was selected, making it a highly visible area. This initiative is intended to assist in re-connecting school education, community, economics, traditional knowledge, and the environment.

SONICS AND SOJOURNS FALL FESTIVAL

Proponent:	Sonics & Sojourns
Date Approved:	September 25, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to host a fall festival in Onanole, Manitoba that will bring together art, nature and conservation to celebrate communities in the Riding Mountain biosphere area and will coincide with Riding Mountain National Park's 75th anniversary celebrations. In addition, the festival will promote organic cuisine, sustainable agriculture, protected areas conservation, sustainable tourism, culture, and demonstrations on practical ways to mitigate or address the climate change issue. Three integrated themes for the festival are proposed: community ownership; environmental leadership; and experiential involvement & learning, in recognition of the rapidly emerging field of experiential tourism.

SPENCE GREENHOUSE DEVELOPMENT PHASE 1

Proponent:	Spence Neighbourhood Association
Date Approved:	March 31, 2009
Total Amount Approved:	\$15,000.00
Total Amount Expended:	\$15,000.00

Summary:

A grant of \$15,000.00 was approved to implement a community greenhouse pilot project and programming as a next step to support and facilitate sustainability improvements in the neighbourhood. A distressed area of the community has been selected for the location of the greenhouse. The area, flanked by apartment buildings, will be transformed into a community green space. It is hoped that this initiative will have a positive impact on community building activities, and in the safety and well-being of the area. The project intends to engage community members in learning about the natural world, growing their own food, and the healing aspects of working in natural environments. The project is expected to become a community resource and asset toward further sustainability and community economic development work, as well as demonstrate urban and inner city agriculture, horticulture, healing gardens and an environmentally focused site.

ST. CHARLES GROWING TOGETHER

Proponent:	St. Charles Interparochial School
Date Approved:	January 8, 2009
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to create an outdoor classroom to provide green learning opportunities for K to Grade 8 students. It is proposed that students will gain an understanding of sustainable development and other environmental issues through various hands-on learning activities. As a component of the outdoor classroom, a greenhouse will be constructed and an environmental-based curriculum for hands-on learning will be implemented to address knowledge gaps about how food is grown. Students will participate in the planning process of the greenhouse, and composting activities. The school intends to partner with the University of Manitoba, Department of Biochemical Engineering for assistance with greenhouse design, materials and placement; St. Frances Xavier Greenhouses will provide student instruction on vermicomposting, and the Living Prairie Museum will provide information on local plants.

ST. THERESA POINT SANDY BAR SITE AND TRAIL PROJECT

Proponent:	St. Theresa Point Health Authority
Date Approved:	July 15, 2008
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

Summary:

A grant of \$10,000.00 was approved to develop a network of trails linking the school to various community centres and recreational areas. The trails will be used to promote and support community-based programming addressing physical activity, health, culture, sport and environmental awareness. In addition, various locations along the trail will be cleared for environmental and cultural education activities. Fruit bearing trees and shrubs will be planted along the trail, and local materials, such as chipped wood will be used for the trail surface, and a composting demonstration site will be established to showcase how waste materials can be turned into a productive resource. In addition, community workshops on composting will be held, which will assist in furthering the promotion and implementation of sustainable agricultural practices in support of family vegetable gardening, and berry cultivation activities.

SWAN LAKE FIRST NATION COMMUNITY LANDS INFORMATION AND RESEARCH PROJECT

Proponent:	Swan Lake First Nation
Date Approved:	November 27, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to undertake a community planning process to develop a traditional land use study and economic development strategy. Traditional use and occupancy will be determined and the extent of the traditional territory including areas of cultural and ecological importance will be identified. Preliminary interviews with land users and Elders have been held to determine historic and community-specific resource materials. These materials will be assessed and inventoried, and a system for preservation, storage and management to accommodate new acquisitions will be developed. This project is intended to aid the community in making better informed decisions about economic development activities while securing and maintaining the natural environment.

TRANSPORTATION CYCLING CONFERENCE

Proponent:	Bike to the Future
Date Approved:	July 15, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to host a "Transportation Cycling Conference" in Winnipeg to help increase public awareness of the role of sustainable transportation options in Manitoba. The conference will provide information on ways cycling can help Manitoba meet its goals in the area of climate change, along with other related goals including health, transportation, community development and tourism. Participants will be provided opportunities to exchange information and ideas about the benefits of cycling to the environment, including greenhouse gas emission reduction and improved air quality. The conference will focus on how communities can improve their environment by taking measures that will encourage and facilitate an increase in cycling as a sustainable transportation option.

TRIBAL ENVIRONMENTAL AWARENESS CONFERENCE 2008

Proponent: West Region Tribal Council
Date Approved: November 27, 2008
Total Amount Approved: \$5,000.00
Total Amount Expended: \$5,000.00

Summary:

A grant of \$5,000.00 was approved to host a conference-workshop that will focus on environmental issues that are impacting First Nations' land and resources. The intent of the three day workshop is to provide information on various environmental and conservation initiatives, including the Land Environmental Action Fund (LEAF) program and demonstrate how programs can assist and support local sustainable environmental development, educate and inspire further progress on environmental issues impacting First Nations. The WRTC will work collaboratively with Indian and Northern Affairs Canada (INAC) and the Canadian Environmental Assessment Agency (CEAA) in bringing information to conference participants.

UNIVERSITY AND COMMUNITY GREEN CORRIDOR

Proponent: University of Winnipeg, President's Office
Date Approved: November 27, 2008
Total Amount Approved: \$25,000.00
Total Amount Expended: \$25,000.00

Summary:

A grant of \$25,000.00 was approved to conduct a three-phase approach to develop a green corridor between the University of Winnipeg campus and the future site of the Richardson College for the Environment, McFeetors Hall (student residence) and the University of Winnipeg Students Association (UWSA) Day Care. Linkages intersected with transitional green spaces will be established between these urban centres. The project proposes to reclaim hard surface spaces and structures in poor condition and create a safe and efficient multi-use trail. The corridor will be landscaped with indigenous grasses, plantings, and trees and it will serve to highlight and showcase the new environmental college to which it connects, and act as an innovative education centre, demonstrating the sustainable practice of green linkages within the City of Winnipeg.

URBAN ABORIGINAL PEOPLES STUDY

Proponent: Manitoba Aboriginal and Northern Affairs/Environics Institute
Date Approved: November 27, 2008
Total Amount Approved: \$10,000.00
Total Amount Expended: \$10,000.00

Summary:

An allocation of \$10,000.00 was approved for an Urban Aboriginal Peoples Study (UAPS) to be conducted with First Nations, Métis and Inuit people living in 10 Canadian cities. The survey is motivated in part by demographic data, which indicate that a rapidly growing number of First Nations and Métis people, especially young people, are living in cities, either permanently or for significant periods of time. The survey will focus on three components: a general survey documenting the experience, identity, values, and aspirations of Aboriginal peoples living in Canadian cities; a survey of past recipients of the National Aboriginal Achievement Foundation (NAAF) scholarships; and a survey of the Canadian general public on issues relating to Aboriginal peoples. The objective of the survey is to allow comparison of attitudes and perceptions among Aboriginal and non-Aboriginal peoples on a variety of topics as a means of informing and enhancing future dialogue. The survey intends to oversample the general population in Winnipeg and provide a new set of baseline data about the values, aspirations, expectations and experiences of Winnipeg's Aboriginal population. The UAPS data set aims to be a valuable tool to assist in formulating effective policies in many areas of Aboriginal life critical to Winnipeg's future.

WECC PARKING PLAZA

Proponent:	The West End Cultural Centre
Date Approved:	March 31, 2009
Total Amount Approved:	\$15,000.00
Total Amount Expended:	\$15,000.00

Summary:

A grant of \$15,000.00 was approved to develop a green parking area, green oasis, secure bicycle parking, and a comprehensive recycling station as part of the West End Cultural Centre's facility redevelopment activities to achieve LEED silver. It is proposed that an innovative parking plaza will be developed and used as a model for future development. Environmental design students from the University of Manitoba will assist in developing and implementing the design to ensure that the most environmentally sustainable materials and construction practices are employed, with the intent of using as much salvaged and recycled material as possible, and to address water drainage, air and water pollution, and greening issues. In undertaking this initiative, environmentally sound decisions and actions in construction will be supported and innovation in sustainable development industries will be promoted. Employment and training opportunities on environmentally responsible construction practices will be provided to disadvantaged residents of the inner city neighbourhood.

WEED WASTE DISPOSAL: IN SEARCH OF A SUSTAINABLE ALTERNATIVE

Proponent:	Living Prairie Museum
Date Approved:	November 27, 2008
Total Amount Approved:	\$11,825.00
Total Amount Expended:	\$11,825.00

Summary:

A grant of \$11,825.00 was approved for research and to design a medium scale weed waste disposal system. The intent of the project is to provide a sustainable and viable alternative to bagging and landfilling weeds, in addition to addressing concerns regarding proper and effective disposal methods of invasive plants. A community action plan aimed at proper removal and disposal of invasive weeds, including sound waste management practices will be developed for use by other groups involved in hand removal of invasive species.

UNDERSTANDING OUR ENVIRONMENT

PROJECTS ALLOCATED FUNDING

DURING THE 2008/2009 FISCAL YEAR

UNDER THE SDIF OPEN CATEGORY

Number of Projects: 30

Total Amount Expended: \$473,898.00

<u>Project Name</u>	<u>Total Expended</u>
2010 Prairie Conservation and Endangered Species Conference	\$10,000.00
3rd Annual Igniting the Fire Gathering	\$5,000.00
An Examination of Habitat Fragmentation and Wildlife Corridors in the Riding Mountain Aspen Parkland: Recommendations of Areas for Conservation	\$13,100.00
Bird Responses to Prairie Size	\$16,000.00
Bringing Sustainable Development to Our Schools	\$10,000.00
Building Adaptive Capacity: Biosphere Reserves	\$8,200.00
Choose the Future: Education for Sustainable Development International Conference	\$10,000.00
Controls on Tallgrass Prairie Diversity, Year 4	\$19,000.00
Development of a Science-based Management Policy for Recreational Vehicle Use in Manitoba Provincial Parks	\$24,500.00
Dutch Elm Disease Research Project, Year 4	\$23,265.00
Education Program Start Up	\$5,000.00
Enhancing Bear Smart Behaviour: Education and Research, Year 3	\$22,500.00

<u>Project Name</u>	<u>Total Expended</u>
Fatal Attraction	\$5,000.00
Feral Pig Detection and Mapping	\$23,825.00
Get to Know Virtual Hikes	\$25,000.00
Habitat Selection of Barred Owls	\$20,500.00
Identification of the Immature Stages of the Dragonflies and Damselflies (Odonata) of Manitoba	\$12,000.00
Interpretive Signs on Manitoba's Amphibian Fauna	\$25,000.00
Manitoba Breeding Bird Atlas	\$25,000.00
Manitoba First Nations Species at Risk Surveys	\$25,000.00
Manitoba Golden-winged Warbler Project	\$25,000.00
Manitoba Science Academy 2008 Summer Term	\$16,000.00
Penny Visits Oak Hammock Marsh	\$15,000.00
Prairie Birds in Southwestern Manitoba, Year 2	\$24,870.00
Save Our Skinks Website and Reptiles and Amphibians (Herps) Atlas Website	\$25,000.00
Understanding Sustainability through Monarch Butterflies: Teaching and Learning with Monarch Butterflies	\$6,000.00
Understanding the Environment Through Exploration	\$5,000.00
Western Grebes at Delta Marsh	\$16,000.00
Wind Power and Migratory Bats, Year 2	\$11,138.00
Youth Encouraging Sustainability Youth Forum – Field Camps	\$2,000.00

UNDERSTANDING OUR ENVIRONMENT

DETAILED LISTING OF PROJECTS ALLOCATED

FUNDING DURING THE 2008/2009 FISCAL YEAR

2010 PRAIRIE CONSERVATION AND ENDANGERED SPECIES CONFERENCE

Proponent:	Prairie Conservation and Endangered Species Conference, Manitoba Steering Committee
Date Approved:	January 8, 2009
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

Summary:

A grant of \$10,000.00 was approved to host the 9th Prairie Conservation & Endangered Species Conference in Winnipeg, Manitoba, February 2010. The 2010 conference theme is "Patterns of Change: Learning from our past to manage our present and conserve our future" and will focus on critical issues of prairie sustainability, including the conservation of prairie and endangered species. The conference will feature plenary sessions and workshops, and will provide a forum for prairie conservation experts to foster awareness, understanding and action on issues related to native prairie conservation.

3RD ANNUAL IGNITING THE FIRE GATHERING

Proponent:	Turtle Lodge
Date Approved:	July 15, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to host the 3rd annual *Igniting the Fire Gathering* to bring forward Aboriginal perspectives on creating self-sustainable communities, based on principles of self-determination and connection to the land. The 3rd annual will be held during the fall over four-days at Manitou Api in Whiteshell Provincial Park, an ancient traditional and sacred site to many First Nations. This annual gathering is initiated and led by Aboriginal people from many First Nations communities across Canada, and focuses on bringing people together to share knowledge, healing, medicines, ceremonies and prophecies. The event will focus on finding means to restore identity and well-being through cultural reclamation, and to relate to nature and respect the environment through traditional knowledge. More than 300 high school students attended last year's conference.

**AN EXAMINATION OF HABITAT FRAGMENTATION AND WILDLIFE
CORRIDORS IN THE RIDING MOUNTAIN ASPEN PARKLAND:
RECOMMENDATIONS OF AREAS FOR CONSERVATION**

Proponent: University of Manitoba, Natural Resources Institute
Date Approved: September 25, 2008
Total Amount Approved: \$13,100.00
Total Amount Expended: \$13,100.00

Summary:

A grant of \$13,100.00 was approved to conduct research and update maps of wildlife corridors, such as the Blue Wing Corridor and Rose Ridge Corridor that connect Riding Mountain National Park and Duck Mountain Provincial Park. The use of digital mapping will help to identify information gaps or non-apparent features that were missed from traditional mapping techniques. Establishing and maintaining wildlife corridors assists in mitigating the effects of land transformation on plants and animals, in addition to preserving the area's natural habitat.

BIRD RESPONSES TO PRAIRIE SIZE

Proponent: University of Manitoba, Natural Resources Institute
Date Approved: March 31, 2009
Total Amount Approved: \$16,000.00
Total Amount Expended: \$16,000.00

Summary:

A grant of \$16,000.00 was approved for research on Manitoba tall-grass prairies to determine the extent to which habitat degradation causes decline in prairie bird populations. Results from previous research indicate that several prairie bird species, including LeConte's sparrows, Savannah sparrows, and sedge wrens, avoid small prairie patches and have higher densities in larger patches. As the majority of remaining prairie patches in Manitoba is small, avoidance of small prairies reduces the availability of suitable habitat for these species, thus the need to identify the reasons why small patches are avoided by these prairie bird species. The study proposes to investigate whether behavioural ecology, rather than responses to biophysical characteristics of the prairies, explains the observed effects of patch size on prairie birds. If the study methods prove to be effective in attracting birds to settle in small prairies, they may be used to provide viable habitat to grassland birds, while concurrently contributing to the restoration of small prairie patches.

BRINGING SUSTAINABLE DEVELOPMENT TO OUR SCHOOLS

Proponent: Manitoba Education, Citizenship and Youth, Instruction and Assessment Branch
Date Approved: July 15, 2008
Total Amount Approved: \$10,000.00
Total Amount Expended: \$10,000.00

Summary:

An allocation of \$10,000.00 was approved to design, develop and promote activity centres and lesson plans in line with the department's goal to develop an all-encompassing pictorial representation of what sustainable development can mean to young Manitobans, as well as to compliment the Province of Manitoba's Sustainable Development Initiative plan for Grades K – 4. This project would include designing activities that tie the "Earth is Our Home Poster" and theme cards with curriculum objectives for Science, Social Studies, Phys-Ed, Language Arts and Math in each of the grade levels; organizing these activities into a series of packages that are straightforward and easily reproducible by classroom teachers; creating resource lists and links to other websites for these packages; obtaining feedback from classroom teachers; integrating these packages with the existing website; and promoting the materials and educating teachers on their use and possible extensions through teacher in servicing. The activity centres will encourage environmentally sound decisions and actions by providing lessons that address these issues on a number of levels. The lessons will encourage students to read, discuss, write, calculate, research, report, and create "solutions" for environmental concerns.

BUILDING ADAPTIVE CAPACITY: BIOSPHERE RESERVES

Proponent: University of Waterloo, Department of Geography and Environmental Management
Date Approved: July 15, 2008
Total Amount Approved: \$8,200.00
Total Amount Expended: \$8,200.00

Summary:

A grant of \$8,200.00 was approved for the final two phases of a four-phase research project in the Riding Mountain biosphere reserve area to explore key factors that will help to build the region's adaptive capacity for resilience and sustainability. Research proposes to addresses how challenges to collaboration amongst diverse stakeholders may be overcome when managing environmental or ecological issues, such as bovine tuberculosis (TB). The research will identify capacity strengths and needs by examining activities and local perceptions of the biosphere reserve and how people and government agencies address this issue, as bovine tuberculosis is seen as a threat to local livelihoods and has affected different stakeholders. Issues that highlight park and surrounding community relationships and how people are diversifying the regional economy will provide context. The study will focus on what fundamental conditions exist to build community resilience, what will assist rural communities to adapt to change in ways that promote environmentally, socially, culturally, and economically sound decisions, and what factors are needed to enhance the communities' adaptive capacity to help make decisions that decrease their vulnerability to external threats.

CHOOSE THE FUTURE: EDUCATION FOR SUSTAINABLE DEVELOPMENT INTERNATIONAL CONFERENCE

Proponent: Manitoba Education for Sustainable Development Working Group
Date Approved: July 15, 2008
Total Amount Approved: \$10,000.00
Total Amount Expended: \$10,000.00

Summary:

A grant of \$10,000.00 was approved to host "Choose the Future – Education for Sustainable Development Conference" in Winnipeg to bring together a broad range of stakeholders in an effort to further develop, communicate and promote Education for Sustainable Development (ESD) in Manitoba. Through presentations, panels and a showcase, the conference intends to highlight effective ESD practices in all sectors at international, national and local levels. This consultative forum intends to identify gaps, opportunities, and priorities to advance ESD leading to the development of a Manitoba ESD Action Plan.

CONTROLS ON TALLGRASS PRAIRIE DIVERSITY, YEAR 4

Proponent: University of Manitoba, Department of Biological Sciences
Date Approved: March 31, 2009
Total Amount Approved: \$19,000.00
Total Amount Expended: \$19,000.00

Summary:

A grant of \$19,000.00 was approved for the fourth year of a research project to establish factors that determine plant community diversity and structure in Manitoba tall-grass communities. It is proposed that research findings will result in recommendations for enhancing tall-grass restoration via these interactions. Given the rapid disappearance of existing tall-grass prairies, the study seeks to supplement the lack of information on the processes that control tall-grass prairie diversity. Preliminary study results indicate that vegetation on a remnant tall-grass prairie north of Winnipeg is stable over a burning cycle. Research will be continued to examine how fire affects nutrient cycling and how both nutrient availability and soil moisture affects the interaction between soil microbes and plant community diversity.

DEVELOPMENT OF A SCIENCE-BASED MANAGEMENT POLICY FOR RECREATIONAL VEHICLE USE IN MANITOBA PROVINCIAL PARKS

Proponent: University of Manitoba, Department of Environment and Geography
Date Approved: July 15, 2008
Total Amount Approved: \$24,500.00
Total Amount Expended: \$24,500.00

Summary:

A grant of \$24,500.00 was approved for a study to assist in the development of a management plan to reduce the impact of recreational vehicle use on ecosystems in Duck Mountain Provincial Park (DMPP). All-terrain vehicle (ATV) use has become an increasingly popular recreational activity in provincial parks and their use can have a significant impact on sensitive ecosystems. The study will contribute impartial scientific background data to an ongoing public involvement process, and help define management areas for DMPP based on science and stakeholder input. The lessons learned will be applied to create a framework for assessing and developing policy for recreational vehicle use in Manitoba's parks.

DUTCH ELM DISEASE RESEARCH PROJECT, YEAR 4

Proponent:	University of Manitoba, Department of Entomology
Date Approved:	September 25, 2008
Total Amount Approved:	\$23,265.00
Total Amount Expended:	\$23,265.00

Summary:

A grant of \$23,265.00 was approved for the final year of a four-year research project to improve control methods of Dutch Elm Disease (DED) in Manitoba communities. Research will assist with more effective and sustainable DED management strategies to reduce the incidence of DED and annual loss rate to a sustainable level. Several research experiments are being performed regarding the spread of DED. Research will be undertaken to investigate whether rapid removal (i.e. tree removal shortly after DED symptom detection) decreases DED incidence. Research will also be conducted to determine whether beetles emerging in August from newly-symptomatic trees carry fungal spores and what contribution these beetles may have to the overall disease pressure. Other research includes testing in practical trials as to whether rapid removal is superior to current removal timing in reducing transmission of DED, and investigating the use of alternative insecticides in urban environments.

EDUCATION PROGRAM START UP

Proponent:	Prairie Wildlife Rehabilitation Centre Inc.
Date Approved:	November 27, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to establish a mobile youth outreach program that will educate and create awareness of important wildlife issues at the local and global scale, many of which are closely linked with environmental issues such as habitat loss, pollutants, and global warming. Combined use of multimedia including photos, power point, video, sounds and live visits from the Centre's educational ambassadors (such as owls and peregrine falcons) will provide information in an interesting and memorable way. The program intends to target youth in rural areas and in schools that are unable to participate in field trips to educational centres. Presentations will be designed to adapt to the current school curriculum for several age groups and will be timed to fit into the regular class periods. The program will bring exciting multimedia and live presentations to the classroom, and will provide young people with knowledge that is expected to lead towards more conscientious environmental decision making in the future.

ENHANCING BEAR SMART BEHAVIOUR: EDUCATION AND RESEARCH, YEAR 3

Proponent:	University of Manitoba, Faculty of Recreation Management
Date Approved:	January 8, 2009
Total Amount Approved:	\$22,500.00
Total Amount Expended:	\$22,500.00

Summary:

A grant of \$22,500.00 was approved for the third year of a study to identify effective strategies that will allow bears and humans to co-exist with minimal conflict. The study proposes to focus upon what impact Manitoba's Bear Smart Program has had on knowledge, understanding and attitudes. As a qualitative study, data will be collected from selected cottage residents on attitudes and recall of Bear Smart materials. The study will involve having residents who have identified themselves as familiar with and having knowledge of Bear Smart behaviour participate in focus groups intended to assess the level of recall and key messages delivered. A second series of focus groups will be conducted with an alternate group, with a view of determining what messages or strategies might be successful in changing attitudes and behaviour. Participants will be exposed to a variety of Bear Smart communications (oral presentation, video, written) and be "tested" for retention to messaging at later dates. Results will assist in providing information regarding the most effective communications strategies and messages that are retained. The study will then follow up with a series of focus groups to "debrief" participants and to provide a better understanding of why certain media and messages were or were not retained.

FATAL ATTRACTION

Proponent:	The Manitoba Museum
Date Approved:	July 15, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to host a traveling exhibit featuring a large number of natural specimens supported by detailed habitat information. The exhibit will focus on the courtship rituals of species and the role that their environment plays in supporting that activity. In addition, negative impacts such as habitat destruction through climate change or pollution will be central to the examination of this activity. Specially developed education modules will be developed to support the exhibit, and will be used by Museum animators to advance learning, as well as to heighten awareness about conservation. The exhibit will provide an opportunity for Manitobans to explore a fascinating aspect of nature through the presentation of unique and rare specimens. The exhibit was produced by some of the most respected institutions in Europe and includes a number of impressive mounts, as well as, interactive stations designed to challenge visitors in their bid to recreate the exacting conditions required in nature to attract the right mate.

FERAL PIG DETECTION AND MAPPING

Proponent:	Knudsen Wildlife Management Systems
Date Approved:	July 15, 2008
Total Amount Approved:	\$23,825.00
Total Amount Expended:	\$23,825.00

Summary:

A grant of \$23,825.00 was approved to develop techniques that will assist in detecting feral pigs at low densities and create a profile and map of feral pig habitat in Turtle Mountain Provincial Park. Detecting feral pigs at low densities is difficult as they are difficult to observe and are primarily nocturnal. Their high reproductive rate and lack of natural predators make them a dangerously invasive species. By the time feral pigs have become sufficiently abundant to be easily detected, they are almost impossible to eradicate. Results of this initiative will assist in forming an effective plan for information sharing, networking and evaluation of the methodology. Airborne imaging detection systems will be used to gather images of shorelines in Turtle Mountain Provincial Park, where feral pigs have been observed. Video imagery, high-resolution stills, and ground collected data will be used to document vegetation composition, forest structure, relief, water bodies, and degree of human use in a way that indicates the risk of having feral pigs become entrenched in a locality. The output will be a map indicating the presence and absence of feral pigs in Turtle Mountain Provincial Park.

GET TO KNOW VIRTUAL HIKES

Proponent:	Robert Bateman Get to Know Program
Date Approved:	January 8, 2009
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to develop and produce an interactive environmental educational program for Manitoba youth. The "Get to Know Virtual Hikes" program will be delivered online through the Get to Know website (www.gettoknow.ca). The organization will partner with local museums, environmental stakeholders, and parks organizations to prepare and assemble lesson plans, field guides, reference materials, videos, photographs, virtual hiking tours, and local species profiles for the program, as well as provide training for teachers and educators to facilitate the program's integration and use in the classroom. Programming developed will emphasize environmental literacy in urban areas, where it is considered to be most at-risk, and will contain "virtual hikes" of urban-area parks. Students accessing this online media resource will be provided with information about local ecosystems, presented in a format that is instructive, entertaining and easy to use. Teachers in targeted schools will receive information sessions and training on the value of environmental education and the ways the program can be utilized both in the classroom and outdoors. By featuring real local parks and wildlife, the program proposes to act as an initial step toward real and meaningful outdoor experiences that instills the importance of re-connecting children with nature.

HABITAT SELECTION OF BARRED OWLS

Proponent:	University of Manitoba, Department of Biological Sciences
Date Approved:	November 27, 2008
Total Amount Approved:	\$20,500.00
Total Amount Expended:	\$20,500.00

Summary:

A grant of \$20,500.00 was approved for a study of barred owl nesting sites, to record habitat types where this species occurs, and compare undisturbed habitat to that of managed areas. Extensive field studies on barred owl breeding habitat have been completed in other parts of North America, but there has been no systematic research describing nest-site specific habitat for Manitoba. Data on nesting habitat, longevity, dispersal, diet, nest fidelity, and basic population status are unavailable for Manitoba. The large cavity nesting habit of these owls has resulted in its use as an indicator species of healthy forest ecosystems. Study findings will allow for the protection of specific nesting sites, as well as, provide information to assist forest companies and government agencies to manage forests in a sustainable manner for this and other large diameter tree cavity dependant species.

IDENTIFICATION OF THE IMMATURE STAGES OF THE DRAGONFLIES AND DAMSELFLIES (ODONATA) OF MANITOBA

Proponent:	University of Manitoba, Department of Entomology
Date Approved:	July 15, 2008
Total Amount Approved:	\$12,000.00
Total Amount Expended:	\$12,000.00

Summary:

A grant of \$12,000.00 was approved for a study of dragonflies, of which 98 species are known to exist in Manitoba. Identification keys for the families, genera and species will be designed, and representatives to support the construction and validation of the key will be collected. The majority of the life cycle for most species is spent in the water, where suitable habitat is selected by females to lay eggs. The availability of food, the persistence of the habitat and the quality of the water ultimately determines the survival of a species in that particular site. Larvae will be collected from a variety of aquatic habitats in southern Manitoba. All collected specimens will be preserved and deposited in the J.B. Wallis Museum, where collection information will ultimately be entered into the Biota database in the museum for use in further studies.

INTERPRETIVE SIGNS ON MANITOBA'S AMPHIBIAN FAUNA

Proponent:	Zoological Society of Manitoba
Date Approved:	September 25, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to produce bilingual interpretive panels on amphibians for distribution to nature centres, museums, interpretive trails and parks throughout the province. The panels will highlight the worldwide plight and extinction of hundreds of amphibians and are being produced as part of the Year of the Frog, Biodiversity Day programs in Manitoba. The signs are intended to convey the message of the importance of amphibian conservation, as amphibians are highly susceptible to habitat and water-quality deterioration, and serve as excellent indicators of environmental problems.

MANITOBA BREEDING BIRD ATLAS

Proponent:	Manitoba Naturalists Society
Date Approved:	January 8, 2009
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved for development of a province-wide comprehensive document on the status of all breeding bird species in Manitoba. Detailed data on the distribution and abundance of all bird species will be collected and will form a baseline for the examination of trends across eco-regions, in higher taxonomic groupings, and in avian guilds (groups of birds related by similarities in ecological niche rather than taxonomy). The Manitoba Breeding Bird Atlas will contain detailed information and maps on the distribution and relative abundance of all breeding bird species throughout the province. This initiative aims to improve understanding of ecosystem-level processes and to identify areas of concern, which can then be used to develop conservation action plans.

MANITOBA FIRST NATIONS SPECIES AT RISK SURVEYS

Proponent:	Centre for Indigenous Environmental Resources
Date Approved:	September 25, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to conduct research on various species at risk in Lake Manitoba First Nation, Swan Lake First Nation, and Roseau River First Nation. Very little is known about species at risk on First Nation lands, including occurrence and population size, and communities may inadvertently be engaging in activities that could negatively impact habitat for species at risk. Surveys will be undertaken for species at risk, including the Least Bittern, Hairy Prairie Clover, Northern Prairie Skink, Western Silvery Aster, Riddell's Goldenrod and Small White Lady Slipper. The communities will participate in conducting field surveys; this is expected to build capacity within the community through increased knowledge and awareness, and lead to ownership of protection and stewardship of species at risk and critical habitat on their lands.

MANITOBA GOLDEN-WINGED WARBLER PROJECT

Proponent:	Bird Studies Canada
Date Approved:	July 15, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to conduct a series of Golden-Winged Warbler (GWWA) surveys in Manitoba to obtain information on their distribution, population densities, habitat associations, and genetic information. This species has not been studied in south-eastern Manitoba, and data collected will be of importance given the recent listing of this species as being threatened. Study findings are expected to improve current knowledge of GWWA population size and habitat associations and will provide a conservation assessment leading to the development of a management strategy for this threatened species.

MANITOBA SCIENCE ACADEMY 2008 SUMMER TERM

Proponent: Manitoba Science Academy
Date Approved: September 25, 2008
Total Amount Approved: \$16,000.00
Total Amount Expended: \$16,000.00

Summary:

A grant of \$16,000.00 was approved for a summer program for high school students in environmental and conservation research, with findings to be incorporated into scientific reports and delivered in oral presentations. The program will focus on students undertaking research projects that address various issues, such as problems related to grain infected by the fusarium fungus; using liquid nitrogen to control insect infestation; developing a sanitizing system for trays used in food processing plants; and undertaking studies to protect Lake Sturgeon. The purpose of the program is to produce scientific reports that provide sound data and address particular issues of environmental concern. Students successfully completing the program will receive two grade 12 credits from the Whiteshell School Division.

PENNY VISITS OAK HAMMOCK MARSH

Proponent: Peanut Butter Press
Date Approved: July 15, 2008
Total Amount Approved: \$15,000.00
Total Amount Expended: \$15,000.00

Summary:

A grant of \$15,000.00 was approved to publish a children's book entitled: "Penny Visits Oak Hammock Marsh", with corresponding environmental educational resource materials as lesson plans for teachers that address the Manitoba science curriculum outcomes for grades 2 and 4. The book is intended as a field guide to introduce children to various species of marsh birds and animals and to instill an appreciation for Manitoba's environment and natural resources. The book will be available to the public and distributed to Manitoba schools and libraries. Data will be compiled from surveys to determine the effectiveness of this resource.

PRAIRIE BIRDS IN SOUTHWESTERN MANITOBA, YEAR 2

Proponent: University of Manitoba, Natural Resources Institute
Date Approved: July 15, 2008
Total Amount Approved: \$24,870.00
Total Amount Expended: \$24,870.00

Summary:

A grant of \$24,870.00 was approved for the second year of a two-year study of grassland birds and associated vegetation in Wildlife Management Areas (WMAs) and non-native prairies in southwestern Manitoba to determine how protected areas and private lands contribute to the conservation of grassland birds. The study will also compare whether diversity and density of prairie birds, including species-at-risk, varies with native and non-native vegetation, and with the type of matrix habitat that surrounds each grassland patch. Grassland bird populations have declined across North America in recent decades, with the loss and degradation of native habitat as the most likely causes. Although WMAs constitute a small proportion of remaining grasslands, they offer protection from development, which may have a significant impact on long-term persistence of the grassland bird community.

SAVE OUR SKINKS WEBSITE AND REPTILES AND AMPHIBIANS (HERPS) ATLAS WEBSITE

Proponent:	NatureNorth.com
Date Approved:	January 8, 2009
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

Summary:

A grant of \$25,000.00 was approved to raise awareness of the Prairie Skink and of reptile and amphibian species in Manitoba and the need to manage habitats properly to conserve these species. An on-line reptiles and amphibians atlas will be developed and a citizen-science network established to report sightings of all reptile and amphibian species in the province. Reptiles and amphibians are considered "indicator" species for environmental health. In addition, the "Save Our Skinks" website will continued to be developed to allow individuals to post comments, observations or data related to skinks in Manitoba, and to allow landowners and the public to get involved with skink conservation and recovery activities for this endangered species. Access to on-line resources will assist in providing information on species distribution and status, as well as techniques and protocols to best steward critical habitats.

UNDERSTANDING SUSTAINABILITY THROUGH MONARCH BUTTERFLIES: TEACHING AND LEARNING WITH MONARCH BUTTERFLIES

Proponent:	Monarch Teacher Network-Western Canada
Date Approved:	January 8, 2009
Total Amount Approved:	\$6,000.00
Total Amount Expended:	\$6,000.00

Summary:

A grant of \$6,000.00 was approved for a series of "Teaching and Learning with Monarch Butterflies" workshops to instruct Manitoba teachers and educators on how to raise monarch butterflies at all stages of development. Over the next three years, workshops that focus on environmental issues impacting the monarch butterfly and its migration will be held, and participants will gain knowledge, necessary to raise Monarch butterflies in the classroom. Educators will be provided with resources and tools to help students think critically and problem solve environmental issues such as deforestation and climate change that impact monarchs across North America.

UNDERSTANDING THE ENVIRONMENT THROUGH EXPLORATION

Proponent:	William Street Publishing
Date Approved:	July 15, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

Summary:

A grant of \$5,000.00 was approved to promote and increase awareness of Manitoba's natural environment through written descriptions and self-guided tours and trips, each with concise locations where people can hike, walk, bike and take part in other natural experiences. Conventional maps and printed text directions will be created to identify specific routes and precise locations for nature exploration or through virtual visits, and written descriptions and self-guided tours for trips to provincial-class natural locations will be highlighted with emphasis on conservation, habitat management and environmental significance.

WESTERN GREBES AT DELTA MARSH

Proponent:	University of Manitoba, Natural Resources Institute
Date Approved:	March 31, 2009
Total Amount Approved:	\$16,000.00
Total Amount Expended:	\$16,000.00

Summary:

A grant of \$16,000.00 was approved to conduct a study to reevaluate the status of Western Grebes at Delta Marsh. The study intends to determine if environmental changes, such as water level stabilization and vegetation composition have influenced the nesting ecology, distribution and population status of the Western Grebes. Other than brief surveys, there has been no extensive research completed since 1976, and the species appears to be declining. Since 1971, Lake Manitoba's water level has been regulated at stable high levels, preventing natural coastal marsh regeneration and possibly reducing the value of the marshes for nesting. Also, the presence of the common carp, an alien invasive species, and its foraging and spawning behavior is known to contribute to water turbidity, which may impact the foraging behavior of Western Grebes. Future management actions for the Delta Marsh Rehabilitation Project, such as screens to prevent common carp from entering the marsh, may also affect the movement of Western Grebe broods from the marsh to Lake Manitoba.

WIND POWER AND MIGRATORY BATS, YEAR 2

Proponent:	University of Winnipeg, Centre for Forest Interdisciplinary Research
Date Approved:	July 15, 2008
Total Amount Approved:	\$11,138.00
Total Amount Expended:	\$11,138.00

Summary:

A grant of \$11,138.00 was approved for the second year of a three year study to determine potential impacts of wind power on forest bat populations in Manitoba. Year One results identified the presence of local breeding populations of migratory bats in the vicinity of wind plants, and of bat mortalities in the area. Further study will be conducted to determine how geography and site selection may influence mortality impacts. Recommendations to mitigate the impact of wind facilities on migratory bats in Manitoba will be developed.

YOUTH ENCOURAGING SUSTAINABILITY – YOUTH FORUM-FIELD CAMPS

Proponent:	Science Council Manitoba
Date Approved:	July 15, 2008
Total Amount Approved:	\$2,000.00
Total Amount Expended:	\$2,000.00

Summary:

A grant of \$2,000.00 was approved for a series of youth forum-field camps at various venues focusing on sustainability issues in connection with the United Nations International Year of Planet Earth. The field camps will address integrated multidisciplinary themes of forests, air, water and soils, and will emphasize critical thinking, problem solving and decision making to develop action plans for addressing the sustainability issues connected to these themes. The workshops, targeted to teacher/student mentored teams, are also intended to facilitate the creation of research projects of excellence for the annual Youth Encouraging Sustainability Project Showcase held at Oak Hammock Marsh Interpretive Centre.

**SPECIAL INITIATIVES
ALLOCATED FUNDING
DURING THE 2008/2009 FISCAL YEAR
UNDER THE SDIF OPEN CATEGORY**

Number of Projects: 2

Total Amount Expended: \$181,684.37

<u>Initiative</u>	<u>Total Expended</u>
Flin Flon Soil Improvement Project-Phase One	\$69,184.37
Manitoba Tire Stewardship Program- Completing the Transition to an Industry- Funded Model	\$112,500.00

SPECIAL INITIATIVES
DETAILS OF PROJECTS ALLOCATED
FUNDING DURING THE 2008/2009 FISCAL YEAR

FLIN FLON SOIL IMPROVEMENT PROJECT-PHASE ONE

Administered by:	Manitoba Conservation, Air Quality Section
Date Approved:	August 12, 2008
Total Amount Approved:	\$150,000.00
Total Amount Expended:	\$69,184.37

Summary:

A study of metals and other elements in soils at various publicly accessible areas of Flin Flon in 2006 found that levels of some metals exceeded Canadian Soil Quality Guidelines at many of the sites. Though a preliminary review of the soil test results suggested that the risk to human health was likely low, a comprehensive human health risk assessment was commenced to better and more fully determine the risk. As an early preventative measure to protect young children using public parks while the findings of the risk assessment were being awaited, an allocation of \$150,000.00 was approved to proceed with improving soils in 10 Flin Flon parks which had high levels of metals. A landscape architect was retained to develop the plans for soil improvement and to undertake the initial soil improvements at the first two sites. A community park planning session was held to provide a framework for park renewal planning, and conceptual plans for initial work at the first two sites were developed and consultation held with the community. Soil improvement work was undertaken including surface reworking and placement of clean soil during the fall of 2008, with sodding to be completed in the summer of 2009. Conceptual plans for the remaining eight sites plus additional work at the initial two sites were developed during the winter, with public consultation undertaken and plans prepared for phase 2 soil improvement works.

**MANITOBA TIRE STEWARDSHIP PROGRAM – COMPLETING THE
TRANSITION TO AN INDUSTRY-FUNDED MODEL**

Administered by:	Tire Stewardship Board
Date Approved:	November 20, 2008
Total Amount Approved:	\$125,000.00
Total Amount Expended:	\$112,500.00

Summary:

A grant of \$125,000.00 was approved to support the Off-the-Road (OTR) Tire Program and complete the transition to the new industry-led program under Tire Stewardship Manitoba (TSM). The intent of the OTR clean up program was to eliminate the excess inventory of unprocessed scrap tires approximately 11,000 scrap tires. As part of the final agreement to transfer responsibility for the management of scrap tires in Manitoba to TSM, Manitoba agreed to reduce the inventory of scrap OTR tires to a "working level" or about 2,000 tires. It is intended that TSM will support the program by collecting and processing the remaining OTR tires.

BROAD ALLOCATIONS CATEGORY

FUNDING ALLOCATIONS

DURING THE 2008/2009 FISCAL YEAR

Number of Broad Allocations: 6

Total Amount Expended: \$1,785,290.92

<u>Project Name</u>	<u>Total Expended</u>
Environmental Youth Corps (EYC)	\$220,386.28
Manitoba Climate Change Action Fund (MCCAF)	\$375,000.00
Waste Reduction and Pollution Prevention (WRAPP) Fund	\$534,948.18
Water Stewardship Fund (WSF)	\$345,861.42
Bear Smart Initiative	\$109,095.04
Manitoba Forestry Association Woodlot Program	\$200,000.00

BROAD ALLOCATIONS CATEGORY

DETAILED LISTING OF PROJECTS ALLOCATED

FUNDING DURING THE 2008/2009 FISCAL YEAR

ENVIRONMENTAL YOUTH CORPS

Proponent: Manitoba Conservation
Date Approved: 2008/2009 Treasury Board Estimates Review Process
Total Amount Approved: \$225,000.00
Total Amount Expended: \$220,386.28

Summary:

The Environmental Youth Corps (EYC) has provided Manitoba's young people with an opportunity to prepare for the environmental challenges of tomorrow by helping them gain valuable education and experience today. EYC encourages youth to volunteer within their community for projects to improve and protect Manitoba's environment. The EYC program allows youth the opportunity to be involved in a variety of environmental activities that may otherwise not occur. During the past 18 years, more than \$3.3 million has been provided to community-based projects involving over 88,000 youths. As a result, Manitoba youth have increased their appreciation and responsibility towards their environmental surroundings, as well as learned the importance of voluntary community involvement.

Environmental projects eligible for funding to a maximum of \$5,000.00 include: water quality, waste minimization (recycling, composting, etc.), protection of flora and fauna, rehabilitation and conservation of the natural environment, wildlife conservation and habitat preservation.

SUMMARY

Total EYC 2008/2009 Allocation	\$225,000.00
Applications Processed	114
Applications Approved	104
Applications Declined	4
Applications Deferred	5
Applications Withdrawn	1
Number of Youth Involved	6,490
Total Amount of Grants Approved/Expended	\$207,199.39
Program Administration	\$13,186.89
Total Expended	\$220,386.28

Brief descriptions of the 104 projects approved under the EYC program during the 2008/2009 fiscal year are as follows:

CENTRAL REGION

Angus McKay School, Winnipeg, received \$1,711 to involve 150 students in a school yard enhancement project, constructing and maintaining a purple martin complex, as well as planting fruit bearing native shrubs, creating caterpillar/butterfly observation houses and habitats. Students will record findings and present them at an Environmental Fair.

Anola School Playground, Anola, received \$1,500 to involve 30 students in a school ground enhancement project, establishing an outdoor classroom planting gardens and trees, as well as, installing garbage bins and laying down mulch.

Arborg-Bifrost Parks and Recreation Commission received \$2,950 to involve 72 youth in a beautification and enhancement project, cleaning the Town of Arborg, participating in clean up activities, planting trees and flowers in Civic Park and the Sundial Park.

Assiniboine Watershed Network, Winnipeg, received \$3,000 to involve 225 youth in a riparian restoration and education project planting trees, community clean up and invasive species removal initiatives along Sturgeon, Omand's and Truro creeks.

Boys and Girls Club of Winnipeg Inc. received \$2,500 to involve 200 youth from the Freighthouse, Gilbert and the Sister MacNamara Boys and Girls Clubs in a community enhancement project. Youth will participate in community clean ups, plant fruit bearing trees, establish composting demonstration sites and vermicomposting bins, as well as install mulch walkways and garden benches.

Broadway Neighbourhood Centre, Winnipeg, received \$2,985 to involve 15 youth in a community enhancement project building and maintaining vegetable and butterfly gardens, in addition to a mural along one of the walls creating a themed garden based on the environment and the urban landscape.

Canadian Mennonite University, Winnipeg, received \$3,350 to involve 26 students in a community garden creating butterfly and vegetable gardens, as well as installing pathways, compost bins and rain barrels.

Clearview School, Elm Creek, received \$1,575 to involve 30 students in a community enhancement and beautification project cleaning ditches, implementing an "Adopt-a-Highway" program and developing a recycling center at the school. In addition, butterfly attractant perennials, berry shrubs and trees will be planted.

Collicutt School, Winnipeg, received \$840 to involve 20 students in an outdoor classroom project installing garden benches, laying woodchips and paving stones around flower gardens. Students will also plant trees to create a garden ecosystem that will become a friendly habitat for wildlife and birds.

Covenant Christian Reform Church, Winnipeg, received \$500 to involve youth in a green space enhancement project planting native trees and installing bike racks.

Crestview Park Day Nursery Inc., Winnipeg, received \$2,464 to involve 78 youth in a school yard enhancement project installing pathways, gardens, climbing vines and bridges, as well as planting and enclosing trees and shrubs to cut down on soil and water loss.

Crystal Spring School, Ste. Agathe, received \$1,280 to involve 35 students in a community enhancement project planting trees and installing weed-stop fabric.

Dakota Tipi School, Dakota Tipi, received \$769 to involve three youth in a waste reduction project promoting recycling within the community. Youth will distribute recycling bins throughout the community, and recyclables will be picked and transported to a recycling depot.

Dauphin River School, Gypsumville, received \$3,280 to involve 20 youth in a shoreline clean up project picking up litter and debris along the Dauphin River.

Discovery Children's Center, Winnipeg, received \$3,375 to involve 200 youth in a community greening project. Participants will create and maintain raised garden beds, plant trees, take part in composting activities, enhance butterfly and flower gardens by planting more flowers, as well as growing vines and arches to beautify playground areas.

Earl Grey Community, Winnipeg, received \$600 to involve 15 youth in a beautification project building planters, planting flowers and weeding grounds, as well as taking part in a community clean up, removing graffiti and picking up litter and debris.

École Bonaventure, Selkirk, received \$1,575 to involve 35 students in an outdoor classroom project establishing flowerbeds with composted materials, planting native trees, shrubs and butterfly attractant perennials.

École Communautaire Réal Bérard, Winnipeg, received \$1,645 to involve 16 youth in a community beautification project. Youth will implement an adopt-a-highway program, community clean up activities, energy reduction projects, recycling initiatives and tree planting.

École River Heights Middle School, Winnipeg, received \$300 to involve 30 students in a waste reduction project aimed at reducing school lunch waste by 50% through vermicomposting activities and recycling.

Friends of Bunn's Creek, Winnipeg, received \$2,500 to involve 50 students from Maple Leaf Elementary School and Chief Peguis High School in a riparian restoration project. Students will plant trees and shrubs, participate in clean up events, as well as, provide guided tours and prepare resource materials on the park.

Friends of the Garden, St. Claude, received \$2,018 to involve 125 students in a green space enhancement project planting flowers started by seed for transplanting into community gardens. Youth will plant trees and shrubs and maintain gardens for school grounds and Town of St. Claude.

Gimli Youth Community Partnership Inc., Gimli, received \$3,865 to involve 12 youth in a water conservation and education project. Youth will partner with the Town of Gimli to promote the installation of water usage measuring equipment, assist in developing interactive displays, and organizing demonstrative and participatory workshops for the community.

Hampstead School Outdoor Ed Club, Winnipeg, received \$2,175 to involve 50 students in a school ground enhancement project converting an area of asphalt to green-space with the planting of trees and native shrubs. Youth will also maintain and record activities from established wood duck boxes.

Iberville School, Elie, received \$1,900 to involve 35 students in a community clean up and enhancement project planting trees.

Immigrant and Refugee Community Organization of Manitoba, Winnipeg, received \$1,785 to involve 10 youth in a community enhancement project. Youth will build balcony gardens, remove graffiti, pick up litter, as well as attend and host environmental action seminars to learn the importance of green space in urban environments.

Living Prairie Museum, Winnipeg, received \$3,095 to involve 30 youth in an environmental education project, where youth will create 'Prairie in a Pot' planters filled with prairie grasses and wildflowers. Approved

Local Urban District of Rathwell received \$1,820 to involve four youth in a community enhancement project planting trees to serve as a shelterbelt and noise barrier.

Long Plain Employment and Training Youth Programs received \$1,660 to involve 40 youth in a green space enhancement project. Youth will establish a community vegetable garden, construct birdhouses using recycled wood, and participate in community clean up and cultural events.

Lord Nelson School Education for Sustainable Development Committee, Winnipeg, received \$3,800 to involve 20 youth in a school ground enhancement project. Students will establish a raised garden bed, as well as plant trees and butterfly attractant perennials.

Lubavitch Center, Winnipeg, received \$920 to involve 100 youth in a community enhancement and clean up project.

Machray School, Winnipeg, received \$1,105 to involve 185 students in a schoolyard beautification project creating a raised butterfly garden, planting prairie grasses and butterfly attractant perennials, and the 'West and North Gardens' will be enhanced with planting of annual flowers.

Manitoba Girl Guides, Winnipeg received \$3,170 to involve 300 youth in a riparian restoration project, at a site along Sturgeon Creek in Optimist Park. Youth will plant trees to help prevent soil erosion, reduce waterway contamination and support wildlife as part of the ongoing rehabilitation efforts at the site.

Mallard Community Council received \$2,212 to involve four youth in a community enhancement project building recycling bins, hosting beautiful yard contests, picking up litter and debris, as well as maintaining community gardens.

Matheson Island Community Council received \$3,000 to involve 15 youth in a community beautification project. Youth will create flower beds, plant trees and flowers, participate in clean up events, sort recycling and store used oil containers, as well as, build bat houses and bird houses.

Montrose School, Winnipeg, received \$3,350 to involve 83 students in revitalizing the community garden. Students will participate in clean up events and garden maintenance, as well as provide tours of the garden to community members.

Murdoch Mackay Collegiate Institute, Winnipeg, received \$1,568 to involve 50 youth in a beautify the school grounds, students will maintain trees and shrubs, tend to gardens, as well as research suitable environments for various eco-friendly products and composting techniques.

Peguis First Nation Training and Employment, Peguis received \$1,175 to involve 175 youth in a community clean up and waste minimization project separating and sorting recyclables from garbage collected.

Peguis Health Services received \$4,560 to involve 800 youth in a community beautification project. Youngsters will plant, maintain and harvest community gardens, and plant trees for shelter belts. Youth will also participate in a community clean up and implement the "Adopt a Highway" program.

Pembina Valley Conservation District, Manitou, received \$4,550 to involve 60 students from 31 schools in an environmental awareness project. Students will use GPS and Geocaching to monitor locations of invasive and native plant species.

Pembina Valley Conservation District, Manitou, received \$928 to involve 10 students from Nellie McClung Collegiate in a watershed clean up project. Students will remove litter and debris from along the edge of the Pembina River, and information sessions will be held with the youth to explain the impacts of pollutants on wildlife, water quality and vegetation.

Princess Margaret School, Winnipeg, received \$1,600 to involve 50 students in creating an outdoor classroom. Students will help establish an outdoor classroom that will include a woodland grove, school mural, exercise path, garden plots, shade trees, wind break, water reduction/redirection pond, prairie grasses areas, and rest areas.

River Elm School, Winnipeg, received \$1,000 to involve 12 youth in an environmental awareness and education project. Youth will pick up litter and debris throughout the community, create indoor and outdoor gardens, as well as develop presentations on environmental issues.

Riverton District Friendship Centre, Riverton, received \$700 to involve 50 youth in a community beautification and enhancement project removing litter and debris from roadsides, parks and lakeshores, as well as planting cedar, wild sage and sweet grasses.

Riverview Community Center, Winnipeg, received \$550 to involve 60 youth in an environmental education project. Students will participate in community clean ups, environmental audits, gardening and tree banding.

Riverview Community Center, Winnipeg, received \$587 to involve 32 youth in a tree banding project, educating youth and residents in the community about the importance of banding trees.

St. Andrews School received \$3,375 to involve 30 students in a green space enhancement project focusing on activities such as tree planting, and building and maintaining a butterfly garden.

St. Charles Catholic School, Winnipeg, received \$1,400 to involve 200 students in an environmental education project. Students will tend and transplant plants grown in the greenhouse.

Selkirk Friendship Centre Inc., Selkirk, received \$1,668 to involve 6 youth in a beautification project. Youth will plant flowers, restore a totem pole, as well as establish a park-like setting with two sitting areas.

Seven Oaks Child Day Care Center, Winnipeg, received \$1,668 to involve 72 youth in an environmental awareness project. Participants will plant butterfly gardens, trees and shrubs, as well as participate in composting and recycling activities.

Spence Neighbourhood Association, Winnipeg, received \$2,325 to involve 30 youth in an environmental education project. Youth will learn about the life cycle of plants, rain cycles and erosion, how to plant and grow vegetables in a garden, the connections between animal/human factors in an urban environment, as well as participate in composting activities.

Springfield Heights School – Muddy Fingers Greening Committee, Winnipeg, received \$5,000 to involve 100 students creating an outdoor classroom, consisting of sensory and interactive garden beds containing trees, butterfly and hummingbird attractant perennials and shrubs. A vegetable garden with root vegetables will also be planted with the harvest being donated to a local food bank.

Southwood Elementary School, Winnipeg, received \$220 to involve 200 youth in a project to beautify the schoolyard. Students will plant trees, shrubs, perennials and spread mulch, as well as weed, water and maintain grounds during summer months.

Town of Winnipeg Beach received \$1,500 to involve two youth in a community beautification project planting butterfly attractant perennials and native flowers.

Treherne Communities in Bloom received \$5,000 to involve 86 youth in a creating a green space. Students will install paths and benches, develop butterfly gardens, plant trees, shrubs and flowers throughout selected sites in the community; including the Treherne Elementary School, Masonic Lodge, Kinette Club and the site of the former Central Hotel.

Victor Mager School, Winnipeg, received \$370 to involve 40 students in establishing a community garden. Youth will maintain the garden in summer months and harvest vegetables in the fall with extra produce being donated to the school food bank.

Victor Mager School, Winnipeg, received \$2,867 to involve 60 students in an environmental awareness project. Students will establish a butterfly garden, monitor Monarch habitats and achieve recognition as an international Monarch Way station. Youth will also participate in creating a safe habitat for frogs, collecting data on both species regarding current and future populations.

Village of Dunnottar received \$3,900 to involve 20 youth in an environmental education and awareness project. Participants will distribute brochures and appropriate bags to promote waste reduction and proper disposal techniques. Youth will also participate in a workshop aimed at educating participants on water conservation.

Westpark School, Portage la Prairie, received \$375 to involve 60 students in a project to restore a part of the school yard into native prairie.

West Broadway Development Corporation, Winnipeg, received \$1,907 to involve 55 youth in establishing community gardens, planting vegetables and flowers, as well as staging a green space development plan that the inner-city youth design and showcase.

Westmount School Complex, Swan Lake, received \$2,125 to involve 150 students in a school enhancement project creating raised flower beds, planting trees, shrubs and flower, as well as establishing an outdoor classroom and picnic areas.

EASTERN REGION

Berens River Community Council received \$2,075 to involve six youth in a community enhancement project building garbage bins, establishing flower beds and planting flowers.

Berens River First Nation received \$1,075 to involve 30 youth in a community beautification project planting flowers, shrubs and trees, and building community flower containers.

Berens River Health Center received \$2,180 to involve 30 youth in a establishing a community garden. Youth will assist in planting and maintaining the garden.

Black River First Nation received \$2,164 to involve 133 youth in a community clean up and waste minimization project with the implementation of a plastic bag reduction initiative. Cloth bags will be distributed throughout the community.

Hofer School, Beausejour, received \$1,000 to involve 38 youth in a school ground enhancement project. This project focuses on establishing a fruit orchard with apple, cherry and plum trees, as well as planting grass seed.

Manigotagan Community Council received \$3,264 to involve 25 youth in a riverbank clean up project. Participants will assist with picking up litter and debris, planting trees, as well as constructing flower beds.

Sagkeeng Anishinabe High School, Pine Falls, received \$3,235 to involve 60 youth in a community garden project. Students will plant vegetables, herbs, and flowers, as well as fruit bearing trees and shrubs.

Springwell School, Lac du Bonnet received \$1,000 to involve 21 youth in a school ground enhancement project converting an open field into a fruit orchard with apple trees and grape plants.

Town of Lac du Bonnet received \$495 to involve four youth in a community beautification project. This project will focus on picking up litter and debris along lakefront area.

NORTHEAST REGION

City of Thompson received \$760 to involve four youth in a community beautification project. Youth will establish a garden bed and transplant existing shrubs into the new garden.

God's Lake Narrows Community Council received \$1,349 to involve 11 youth community clean up and beautification project removing litter and debris from shorelines and picnic areas, building and locating refuse containers and planting grass seed.

Nisichawayaihk Noyo Ohtinwak Collegiate, Nelson House, received \$1,625 to involve 10 youth in a recycling program and environmental education campaign project. Youth will distribute recycling bins, sort and collect recyclables from the high school and the elementary school.

Red Sucker Lake Community Council received \$1,000 to involve seven youth in a community beautification project. Youth will participate in clean up events along major snowmobile routes.

Thicket Portage received \$648 to involve two youth in a shoreline clean up project picking up litter and debris from along the lake and creek shores.

Wapanohk Community School, Thompson, received \$2,638 to involve 440 youth in establishing a school greenhouse. Students will plant and maintain seedlings, as well as initiate a vermicomposting program with the composted material being used as soil for the greenhouse plants.

NORTHWEST REGION

Cormorant Community Council received \$1,500.95 to involve 10 youth in a community beautification project. Youngsters will participate in community and lake shore clean up events.

Cormorant Lake School, Cormorant, received \$2,775 to involve 120 youth in a community beautification and enhancement project planting trees and flowers, locating signage, constructing bat houses, establishing recycling programs and hosting information sessions.

Frontier Collegiate, Cranberry Portage, received 2,475 to involve 15 students in a schoolyard enhancement project planting butterfly attractant perennials, trees and shrubs.

Misipawistik Cree Nation Health Authority, Grand Rapids, received \$3,235 to involve seven youth in a community enhancement and waste minimization project. Students will accomplish this by implementing a recycling program and creating five new community gardens.

Opaskwayak Cree Nation Youth Center received \$2,695 to involve 24 youth in a green space enhancement project. Youth will plant trees to protect community from erosion and to provide a habitat for wildlife.

WESTERN REGION

Camperville Community Council received \$2,500 to involve 12 youth in a waste reduction project. Youngsters will build garbage bins and distribute them throughout the community, as well as post waste reduction signs.

Crane River Recreation Committee received \$1,000 to involve 10 youth in a community beautification project picking up litter and debris throughout the community.

Decker Colony School received \$600 to involve 20 youth in a tree planting project. Students will plant trees to serve as a shelterbelt, windbreak and to decrease erosion rates.

École Macneill School, Dauphin, received \$1,600 to involve 30 students in a school yard beautification project. Students will establish plant beds, walkways and create proper drainage for the landscape.

Erickson Collegiate, Erickson, received \$850 to involve 20 youth in an environmental education project. Youth will grow flowers from seeds in the greenhouse, as well as monitor temperatures, light intensities and water levels of the plants throughout the winter.

Erickson Elementary School received \$2,175 to involve 130 students in a beautification project constructing flower beds and birdhouse, landscaping a berm, as well as planting shrubs and perennials.

Glenboro 4-H Variety Club, Glenboro, received \$1,850 to involve 15 youth in a green space enhancement project. Participants will plant trees along the eastern perimeter of the school yard.

Grandview Variety Club, Gilbert Plains, received \$2,000 to involve 20 youth in a waste minimization project with implementing a plastic bag reduction initiative. Youth will make reusable cotton bags and distribute throughout the community.

Hamiota Conservation Authority received \$2,800 to involve 9 youth in a community enhancement project extending the existing Rails to Trails pathway, as well as hosting an environmental day camp at a local fair.

Keeseekoowenin School, Elphinstone, received \$1,400 to involve 10 youth in a school yard beautification project planting flowers and shrubs, as well as participating in clean up activities.

Manitoba House Local, Kinostota, received \$2,589.44 to involve three youth in a community greening project planting trees, pruning shrubs and trimming grass.

Mather Combined 4-H Club, Mather, received \$285 to involve 10 youth in a green space enhancement project planting trees along the memory wall.

McCreary and District Economic Development, McCreary, received \$3,335 to involve six youth in a community enhancement project. Youth will convert a portion of urban landscape back to its original prairie state. Native prairie wildflowers and grasses will be planted, and interpretative signage will be installed.

Oak Lake Community School, Oak Lake, received \$1,958 to involve 103 students in a schoolyard enhancement project. Youth will establish an outdoor classroom that incorporates a sensory garden, recycling and composting area, as well as a heritage garden/biome classroom. Youth will construct bird feeders and benches and plant a variety of trees, shrubs, vegetables and butterfly attractant perennials.

Pierson Environmental Group received \$3,500 to involve 40 youth in an environmental awareness project focusing on composting, water safety, planting trees and maintaining community gardens.

Roblin-Cartwright Community Development Corp., Cartwright, received \$1,057 to involve 12 youth in a school yard enhancement project. Youth will spread soil, plant trees, shrubs and butterfly attracting perennial plants.

Rock Ridge Youth Committee received \$1,000 to involve 10 youth in a community enhancement project. Youngsters will participate in clean up events, as well as planting flowers.

Rossburn Elementary School, Rossburn, received \$1,675 to involve 130 students in a school enhancement project planting vegetables, trees, shrubs and butterfly attractant perennials.

Rural Municipality of Woodworth, Kenton, received \$3,445 to involve 10 youth in a community enhancement project constructing birdhouses, flower gardens, a sun dial and recycling bins, picking up litter and debris throughout the community, and planting butterfly attracting perennials.

Spence Lake Recreation Committee received \$1,000 to involve five youth in creating a raised butterfly garden. Youth will build butterfly houses and plant butterfly attracting perennial plants, as well as participate in a community clean up.

Swan Lake First Nations received \$2,130 to involve 200 youth in a community enhancement project planting and maintaining trees and gardens, building birdhouses, as well as implementing a recycling program.

Valley Recreation District, Birtle, received \$2,710 to involve 50 youth in restoring the Birtle River Walkway, planting trees, installing refuse and compost bins, creating a woodchip trail and upgrading interpretative signage and benches.

Vincent Massey Environmental Council, Brandon, received \$2,450 to involve 35 youth in continuing their school yard enhancement project. Club members will plant a variety of trees, shrubs, wildflowers and tall grasses, as well as create proper drainage for the landscape.

Waywayseecappo First Nation received \$4,665 to involve 15 youth in a community beautification project planting trees, picking up litter and debris, and locating informational signage throughout the community.

MANITOBA CLIMATE CHANGE ACTION FUND

Administering Department: Manitoba Science, Technology, Energy and Mines - Climate and Green Initiatives Branch
Date Approved: 2008/2009 Treasury Board Estimates Review Process
Total Amount Approved: \$400,000.00
Total Amount Expended: \$375,000.00

Summary:

The Manitoba Climate Change Action Fund (MCCAF) provides cost-effective opportunities for the Province to reduce greenhouse gas (GHG) emissions in targeted sectors in keeping with the Government's climate change commitments and consistent with the goals outlined in both *Green and Growing*, Manitoba's strategic environmental framework, and *Beyond Kyoto*, Manitoba's climate change action plan.

In 2008/2009, a range of practical, Manitoba-based actions that respond to the issue of climate change was supported. The MCCAF continued to be effective in supporting projects to address GHG emissions in high-emitting sectors, such as transportation and agriculture, in addition to supporting climate change public education and outreach programming, northern initiatives, and providing grant assistance for individual climate change projects.

MCCAF SUMMARY

Total Allocation for 2008/2009	\$400,000.00
Applications Processed	8
Applications Approved	8
Applications Deferred	0
Applications Declined	0
Applications Withdrawn	0
Total Amount for Grants Approved	\$375,000.00
Total Amount Expended	\$375,000.00

Brief descriptions of the eight projects approved under the Manitoba Climate Change Action Fund during the 2008/2009 fiscal year are as follows:

EDUCATION AND OUTREACH

CLIMATE CHANGE CONNECTION PHASE VII

Proponent:	Manitoba Eco-Network Inc.
Date Approved:	June 5, 2007
Total Amount Approved:	\$300,000.00
Total Amount Expended:	\$100,000.00
Total Amount Projected:	\$100,000.00 (over FY 2009/2010)

Multi-year funding of \$100,000.00 annually for the three fiscal years beginning in 2007 was approved for the Manitoba Eco-Network to enable it to continue in its role as host to Manitoba's climate change public education and outreach hub, the Climate Change Connection. The Climate Change Connection was originally established as part of a national network of hubs responsible for climate change public education and outreach coordination. The enhanced support for this project allowed the Climate Change Connection to continue to act as a clearinghouse of climate change information, coordinate climate change outreach and build awareness and promote individual and community actions to reduce greenhouse gas (GHG) emissions and make the changes necessary to live more sustainable and climate-friendly lifestyles.

2008 MANITOBA ENVIROTHON

Proponent:	Manitoba Forestry Association
Date Approved:	April 15, 2008
Total Amount Approved:	\$4,000.00
Total Amount Expended:	\$4,000.00

A grant of \$4,000.00 was approved to organize and host Manitoba Envirothon 2008, an annual environmental education competition for high schools. The content and focus of the event differs each year; however, it remains focused around current environmental themes. Teams of five students study curriculum-based environmental resource material with their teacher/advisors and compete in a provincial championship. The winning team subsequently represents Manitoba at the North American "environmental academic Olympics", the Canon Envirothon. Over 30 teams compete annually in Manitoba and it is estimated that over 500,000 students participate each year throughout North America at the Provincial and State level.

PLANNERS NETWORK CONFERENCE

Proponent:	Planners Network Manitoba (PNmb)
Date Approved:	June 30, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

A grant of \$5,000.00 was approved to host the annual Planners Network conference in July 2008. Local, national and international participants took part in the event, which featured a free public lecture and panel on sustainable, active and public transportation and facilitated networking of local organizations with practitioners and advocates from outside Manitoba. The Planners Network Manitoba (PNmb) is an active Canadian chapter of the continent-wide Planners Network (PM).

MANITOBA FOOD MILES

Proponent:	Manitoba Food Charter Inc.
Date Approved:	September 29, 2008
Total Amount Approved:	\$17,000.00
Total Amount Expended:	\$17,000.00

A grant of \$17,000.00 was approved to increase public awareness of climate change and food preservation skills, thereby increasing consumption of sustainably produced local food and decreasing the distance Manitoba food travels, with a corresponding decrease in greenhouse gas (GHG) emissions. The project provides public education, skills and resources towards decreasing the climate change impacts and emissions associated with food and food-focussed agriculture. Youth and school outreach and education on food miles, sustainable food systems, GHG emissions and climate change impacts, as well as local food production and processing workshops, were major components of the project.

IMPACTS AND ADAPTATION

GHG REDUCTION THROUGH ACTIVE, SUSTAINABLE TRANSPORTATION

Proponent:	Resource Conservation Manitoba
Date Approved:	June 5, 2007
Total Amount Approved:	\$300,000.00
Total Amount Expended:	\$100,000.00
Total Amount Projected:	\$100,000.00 (over FY 2009/2010)

Multi-year funding of \$100,000.00 annually for the three fiscal years beginning in 2007 was approved for various strategic greenhouse gas (GHG) reduction initiatives. Building upon previous successes in community-based transportation initiatives with programs such as the Commuter Challenge and the Active and Safe Routes to School (ASRTS), Resource Conservation Manitoba (RCM) will identify and recruit champion workplaces for their urban trip reduction programming and will also look to increase the number of Manitobans who participate by creating promotional materials and education resources for the Commuter Challenge, Workplace Transportation Demand Management (WTDM), Manitoba Student Transportation Network (MSTN), and the Active and Safe Routes to School (ASRTS) Programs. In addition, RCM will be expanding efforts to include more schools and communities throughout Manitoba.

NORTHERN MANITOBA FOOD SELF-SUFFICIENCY PROJECTS

Proponent:	Manitoba Aboriginal and Northern Affairs
Date Approved:	June 5, 2007
Total Amount Approved:	\$225,000.00
Total Amount Expended:	\$75,000.00
Total Amount Projected:	\$75,000.00 (over FY 2009/2010)

An allocation of \$75,000.00 annually for a three-year period, beginning in 2007 was approved to support the development of a broad range of food self-sufficiency projects in remote communities to effectively decrease dependence on air freight shipments of food, thereby reducing greenhouse gas (GHG) emissions. Projects included construction of northern-appropriate greenhouses, vermicomposting workshops, and the Energy Efficient Freezer Program, for storage of preserved food.

MANITOBA ORGANIC TRANSITION PROGRAM

Proponent:	Manitoba Agriculture, Food and Rural Initiatives
Date Approved:	June 5, 2007
Total Amount Approved:	\$150,000.00
Total Amount Expended:	\$50,000.00
Total Amount Projected:	\$50,000.00 (over FY 2009/2010)

An allocation of \$50,000.00 annually for a three-year period beginning in 2007 was approved to provide financial incentives for Manitoba farmers and processors considering converting their cropland, pasture, livestock and/or processing to certified organic status. The incentives will provide a portion of the certification costs for the producer or processor during the three-year transition period. An increase in organic production reduces energy use relative to conventional production; converting to organic production can reduce CO2 output two to two and a half times more and reduce by 2.2 to 2.8 times the energy required by conventional agricultural practices.

COMMUNITY-BASED PEATLAND CARBON MONITORING

Proponent:	Poplar River First Nation
Date Approved:	September 29, 2008
Total Amount Approved:	\$24,000.00
Total Amount Expended:	\$24,000.00

A grant of \$24,000.00 was approved to establish boreal forest/peatlands research sites on the East Side of Lake Winnipeg. The purpose of the project is to apply traditional knowledge in assessing approaches to climate change study; obtain data on carbon sequestration, measurements for Northern peatlands, and baseline data for climate change impacts monitoring; explore biodiversity; study natural disturbances in the boreal ecozone; and apply innovative field technologies. The overall project also has educational, capacity-building, technology transfer, and knowledge transfer goals whereby methods, practices, data, and information are shared among all partners, with particular emphasis on training for youth and students and the integration of traditional ecological knowledge and Western scientific approaches.

WASTE REDUCTION AND POLLUTION PREVENTION (WRAPP) FUND

Proponents Are: Manitoba Conservation, Pollution Prevention Branch
Date Approved: 2008/2009 Treasury Board Estimates Review Process
Total Amount Approved: \$550,000.00
Total Amount Expended: \$534,948.18

Summary:

The WRAPP Fund continues to be an integral program for supporting waste reduction and pollution prevention activities in Manitoba, as municipalities, businesses and community and other organizations continue to seek alternative ways to manage waste materials and protect the environment.

The WRAPP Fund supports projects in the following priority areas: construction and demolition waste management, composting, institutional waste reduction, market development, pollution prevention, integrated waste management system development and planning, promotion and education, regional recycling, and green procurement. Financial partnerships are encouraged.

An annual budget within the WRAPP Fund allocation supports Fund administration, as well as activities related to the development and implementation of the branch's priority areas.

WRAPP FUND SUMMARY

Total Allocation for 2008/2009	\$550,000.00
Applications Processed	31
Applications Approved	23
Applications Deferred to 2009/2010	1
Applications Declined	6
Applications Withdrawn	1
Total Amount for Grants Expended	\$428,662.84
Program Development	\$106,282.34
Total Expended	\$534,948.18

Brief descriptions of the 23 projects within the priority WRAPP Fund areas are as follows:

COMPOSTING AND ORGANIC WASTE MANAGEMENT

COMPOSTING EXPANSION

Proponent:	Samborski Garden Supplies Ltd.
Date Approved:	March 20, 2008
Total Amount Approved:	\$30,000.00
Total Amount Expended:	\$30,000.00

A grant of \$30,000.00 was approved to support Samborski Garden Supplies Ltd. by implementing a source separated organics management and collection system. Organic waste will be collected from commercial establishments and processed into high grade compost available for sale to Manitobans. Organic recyclables are currently being collected from Winnipeg Harvest, Assiniboia Downs, Assiniboine Park Zoo and other large generators in Winnipeg, diverting approximately 175,000 pounds of organics from landfill. The organics management and collection system is being expanded to include other commercial operations, such as restaurants, hotels, florists and grocers.

COMMERCIAL FISH WASTE COMPOST PROJECT

Proponent:	University of Manitoba
Date Approved:	March 20, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

A grant of \$25,000.00 was approved to determine the feasibility of using composting as a waste reduction method to dispose of fish waste from the Northwest Cooperative Fisheries Ltd. (NWCFL). The NWCFL processes approximately 300,000 kgs of fish at their plant in Leaf Rapids and production is estimated to increase to approximately 1 million kgs over the next five years. The project will test the feasibility of using Puratone's in-vessel composter in northern communities. If the project is successful, composting of fish waste may be an environmentally sound solution to ensure that growth in the northern Manitoba commercial fishing industry is environmentally sustainable.

CITY OF STEINBACH'S COMPOST CHALLENGE

Proponent:	City of Steinbach
Date Approved:	July 28, 2008
Total Amount Approved:	\$14,700.00
Total Amount Expended:	\$14,700.00

A grant of \$14,700.00 was approved to implement the City's Compost Challenge program which proposed to decrease the amount of yard and food waste being disposed at the Steinbach landfill through the sales of subsidized compost bins. Master Composters provided free compost workshops and together with the City, began educating the public and promoting the practice and benefits of composting. Composting brochures and additional information were made available to the public at various locations around the City, via local media, and online. Statistics were kept throughout the duration of the Compost Challenge, including the amount of compost material produced at the landfill; number of compost bins sold; number of people enrolled in the free compost workshops; and number of informational resources and brochures distributed.

WASTE REDUCTION THROUGH COMPOSTING

Proponent:	Town of Ste. Anne
Date Approved:	March 11, 2009
Total Amount Approved:	\$1,500.00
Total Amount Expended:	\$1,500.00

A grant of \$1,500.00 was approved to initiate a compost program for the residents of Ste. Anne by offering an incentive to residents through the sale of subsidized Earth Machine compost bins. The Town considers composting a viable, practical and effective component of solid waste management which benefits the municipality by reducing landfill and collection costs, has a positive impact on the environment by diverting waste, and benefits the residents by making compost for gardens and lawns.

ORGANIC WASTE MANAGEMENT DEMONSTRATION PROJECT

Proponent:	RM of Gimli
Date Approved:	March 11, 2009
Total Amount Approved:	\$23,400.00
Total Amount Expended:	\$23,400.00

A grant of \$1,500.00 was approved to develop composting measures to manage organic waste in the municipality. All aspects of the composting cycle will be addressed: kitchen waste will be collected by volunteer families in a variety of containers then moved to the compost site and composted in a variety of composters. Compost will be used as fertilizer at the organic garden site to grow vegetables which will, in turn, become organic material to be collected and composted. Measures will be implemented to ensure that the compost at the landfill site is properly maintained and finished compost is made available to residents at a small cost. In addition, use of compost from composting toilets will be addressed. Records will be kept on the performance of each composter. Progress of the project and hints for using compost will be reported in the community paper on a bi-weekly basis during the project. A booklet containing instructions for composting and organic gardening will be developed for residents.

GROWING TOGETHER

Proponent:	West Broadway Development Corporation
Date Approved:	March 11, 2009
Total Amount Approved:	\$15,000.00
Total Amount Expended:	\$15,000.00

A grant of \$15,000.00 was approved to implement the Community Composting Initiative, a component of the Growing Together Project. Growing Together intends to promote and support a comprehensive list of sustainable environmental practices in the West Broadway area. Project activities include holding workshops, producing a "How and Where to Compost" pamphlet/manual, bringing apartment buildings into the compost strategy, resident compost team-building, longer-term signage for sites, and leaf collection in the fall. The project also entails the recruitment and training of local residents to become leaders of a Compost Team to guide community composting activities.

COMPOSTING FOR COMMUNITY: A GROWING PRACTICE

Proponent:	Spence Neighbourhood Association
Date Approved:	March 11, 2009
Total Amount Approved:	\$15,000.00
Total Amount Expended:	\$15,000.00

A grant of \$15,000.00 was approved to expand the Composting for Community (CC) project through a variety of means: increase the number of businesses and organizations involved in the project, adopt a fee-for-service schedule for pick up of organics, expand to apartment tenants, and build the sustainability of the project. In addition, community composting workshops and general promotion of composting in the neighbourhood will be offered. Initially, the project involved the participation of four local businesses and organizations in composting. Staff was trained in proper waste separation, and the CC staff picked up organic waste with a bike trailer on a daily basis. CC staff transferred the organic waste to community composting sites, and maintained the sites.

CONSTRUCTION AND DEMOLITION WASTE

THE RENEWAL OF THE WEST END CULTURAL CENTRE

Proponent:	West End Cultural Centre
Date Approved:	January 8, 2009
Total Amount Approved:	\$20,000.00
Total Amount Expended:	\$20,000.00

A grant of \$20,000.00 was approved to support a collaborative design process involving the West End Cultural Centre (WECC), Prairie Architects, Milestone Project Management, and the local community to rebuild the WECC. The redevelopment involves a large scale renovation of the original WECC facility and the new construction of a 4,000 square foot concert hall. LEED (Leadership in Energy and Environmental Design) construction, emphasizing sustainable site development, waste management, resource conservation and energy efficiency will be applied to this project with the goal of achieving silver certification. The WECC proposes to divert 75% (by volume) of the construction and demolition waste from landfill to achieve this goal. The total of 75% incorporates the reused materials from other deconstruction projects being used in the reconstruction.

MODEL INTEGRATED WASTE MANAGEMENT SYSTEM DEVELOPMENT AND PLANNING

GLADSTONE WASTE DISPOSAL GROUNDS ENHANCEMENT PROJECT

Proponent:	Town of Gladstone
Date Approved:	January 8, 2009
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

A grant of \$10,000.00 was approved to increase the efficiency of the Town of Gladstone's and the Rural Municipality of Westbourne's operation of the Gladstone Waste Disposal Grounds (WDG). An Integrated Waste Management Plan was developed to improve the management of the WDG, increase recycling, and begin separating waste such as scrap metals and organics for proper management. A weigh scale will be purchased to get an accurate account of the amount of wastes handled at the site. The project involves a public education component to promote recycling, grasscycling, and backyard composting. The management plan is intended to improve the compost site at the WDG, the management of white goods, tire storage, the collection of electronic waste, and will aim to increase the collection of used oil, containers and filters.

REGIONAL RECYCLING

LEAF RAPIDS RECYCLES

Proponent:	Town of Leaf Rapids
Date Approved:	July 28, 2008
Total Amount Approved:	\$3,800.00
Total Amount Expended:	\$3,800.00

A grant of \$3,800.00 was approved to undertake a detailed evaluation of Leaf Rapids' current recycling program. The assessment will help determine the number of residents recycling, the amount and types of recyclables being collected from residents, and the amount and types of recyclables collected in the school, commercial businesses and public places. Evaluation results will help to inform the town's educational campaign to increase recycling. The project will include an educational component in the Frontier School Division with hands on recycling games, contests and projects. Students will receive take-home information on recycling. Recycling bins will be purchased for use by households, the school division, and in various public places.

BLUE BOX RECYCLING PROGRAM

Proponent:	Village of Waskada
Date Approved:	July 28, 2008
Total Amount Approved:	\$1,500.00
Total Amount Expended:	\$1,500.00

A grant of \$1,500.00 was approved to purchase blue boxes for curbside recycling to help encourage residents to divert recyclables from the landfill. The Village hopes that by improving convenience, more households will participate in the recycling program.

DAUPHIN'S COUNTRYFEST RECYCLE PROGRAM

Proponent:	Dauphin's Countryfest Inc.
Date Approved:	November 27, 2008
Total Amount Approved:	\$5,000.00
Total Amount Expended:	\$5,000.00

A grant of \$5,000.00 was approved to assist the recycling program at the annual festival and maximize the amount of materials diverted from the landfill. The organization proposes to establish a permanent recycling site on the festival grounds. Future plans include expanding the environmental focus of the festival to include composting, green procurement, a plate return program and other green initiatives.

COMMUNITY RECYCLING COLLECTION PROGRAM

Proponent:	RM of Morris
Date Approved:	November 27, 2008
Total Amount Approved:	\$12,500.00
Total Amount Expended:	\$12,500.00

A grant of \$12,500.00 was approved to initiate a recycling program by establishing depots in the communities of Rosenort, Sperling, and Lowe Farm. The project aims to improve convenience for local residents and divert 50% of waste from landfill. The RM of Morris intends to communicate the availability of the depots by newsletter, through newspaper advertising. Annual news releases will provide information about the amount materials recycled in each community.

ROSSBURN RECYCLING IMPROVEMENT PROJECT

Proponent:	RM and Town of Rosburn
Date Approved:	March 11, 2009
Total Amount Approved:	\$15,000.00
Total Amount Expended:	\$15,000.00

A grant of \$15,000.00 was approved to improve the current recycling program in an effort to maximize the diversion of waste from the landfill. An insulated area within the current recycling shed will be constructed to provide better working conditions; a new baler will be purchased to increase recycling efficiency; repairs will be made to the cement floor to improve safety; and a forklift will be purchased to improve handling efficiency. In addition, the project will attempt to increase the number of households recycling through promotions and by improving overall efficiency of the community recycling program.

PARKS RECYCLING

COMPREHENSIVE RECYCLING PROGRAM AT BIRDS HILL PROVINCIAL PARK

Proponent:	Birds Hill Provincial Park
Date Approved:	July 28, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$17,640.00

An allocation of \$25,000.00 was approved to establish a recycling program at Birds Hill Provincial Park. Collection stations will be easily accessible in various areas of the park. Recyclables will be collected by park staff and deposited at the municipal transfer station. Birds Hill Provincial Park has partnered with the Friends of Birds Hill to promote the program and co-manage the Manitoba Product Stewardship Program recycling rebate.

COMPREHENSIVE RECYCLING PROGRAM AT GRAND BEACH PROVINCIAL PARK

Proponent:	Grand Beach Provincial Park
Date Approved:	July 28, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$22,262.84

An allocation of \$25,000.00 was approved to establish a recycling program at Grand Beach Provincial Park. Collection stations will be established in accessible areas throughout the park. Recyclables will be collected by park staff and deposited at the municipal transfer station. Grand Beach Provincial Park has partnered with the Grand Beach Cottage Owners Association to promote the program and co-manage the Manitoba Product Stewardship Program recycling rebates.

INFORMATION AND EDUCATION

WASTE REDUCTION SERVICES, YEAR THREE

Proponent:	Resource Conservation Manitoba
Date Approved:	July 28, 2008
Total Amount Approved:	\$150,000.00
Total Amount Expended:	\$150,000.00

A grant of \$150,000.00 was approved to support Waste Reduction Services: Environmental Information Services (EIS), the Compost Action Project, Environmental Speakers Bureau (ESB), and the coordination and promotion of Waste Reduction Week (WRW). EIS allows RCM to maintain core services, conduct research, develop resource materials and coordinate volunteers for various projects and services. The Compost Action Project focuses on education, consultation, referral, training and the provision of resources that target residential organic wastes, institutional and commercial organic wastes, and those who either produce or manage these streams of organics. The ESB provides environmental education support for schools on sustainability issues which include educational materials and classroom presentations on waste minimization and pollution prevention, water conservation, climate change, energy, and other related topics. WRW promotes waste reduction activities throughout Manitoban communities, businesses and schools. As the organizing agency in Manitoba, RCM co-ordinates the flow of information and materials between the national Waste Reduction program and Manitoba participants and distributes waste reduction and energy conservation information to schools, municipalities, and businesses in Manitoba.

REUSABLE BAG PROMOTION & PLASTIC BAG WASTE REDUCTION

Proponent:	Consumers Association of Canada
Date Approved:	July 28, 2008
Total Amount Approved:	\$14,950.00
Total Amount Expended:	\$14,950.00

A grant of \$14,950.00 was approved to plan and implement a campaign designed to promote greater awareness and use of reusable bags in Manitoba. The program will involve the distribution of free reusable bags within Winnipeg, Brandon and surrounding areas along with a promotional strategy to disseminate information regarding the project. The project will incorporate public education on plastic bag waste and reusable alternatives and a survey will be conducted to determine consumer preferences, current patterns of shopping bag use, information needs, and barriers to using re-usable bags.

INDEPENDENT SCHOOL ENVIRONMENTAL FUNDING PROGRAM

Proponent:	Green Manitoba
Date Approved:	November 27, 2008
Total Amount Approved:	\$24,500.00
Total Amount Expended:	\$24,500.00

Summary:

An allocation of \$24,500.00 was approved to support the a program which provides grants of up to \$500.00 to independent and band-operated schools that are excluded from the Manitoba Education, Citizenship and Youth Education for Sustainable Development (ESD) school program. This project supports school and classroom environmental education and action on solid waste reduction (including recycling pick up services), organic waste management and other environmental priorities, such as including energy and water conservation, school naturalization, sustainable and active transportation initiatives.

WASTE REDUCTION AND POLLUTION PREVENTION

"GREEN" RECYCLING CONTAINERS

Proponent:	Ventures Vocational Skills Assessment and Training
Date Approved:	November 27, 2008
Total Amount Approved:	\$4,410.00
Total Amount Expended:	\$4,410.00

Summary:

A grant of \$5,000.00 was approved to design, develop and produce recycling containers for use in community recycling programs. The new containers will be made from plastic containing 70% reground product and will be reusable for other projects. Ventures provides vocational skills assessment and training in partnership with community resources for individuals with mental health issues.

ELIMINATION OF SINGLE USE PLASTIC SHOPPING BAGS

Proponent:	RM of Coldwell
Date Approved:	January 8, 2009
Total Amount Approved:	\$500.00
Total Amount Expended:	\$500.00

Summary:

A grant of \$500.00 was approved to assist the RM of Coldwell in supplying its residents with reusable shopping bags. The project is intended to reduce litter resulting from single use plastic shopping bags and to create more environmental awareness among citizens. The RM recently passed a by-law to eliminate single use plastic shopping bags in the municipality.

BEING ENVIRONMENTALLY RESPONSIBLE AT PAUWELS CANADA

Proponent:	Pauwels Canada Inc.
Date Approved:	March 11, 2009
Total Amount Approved:	\$1,500.00
Total Amount Expended:	\$1,500.00

A grant of \$1,500.00 was approved to assist in the development of an environmental management system (EMS) to employ the principles of sustainable development in all of the company's operations. Project activities include the development of an environmental policy, an environmental system operational control procedures, environment-related legal requirements, an environment-related emergency preparedness and response system for the organization.

CARDBOARD COMPACTOR PROJECT

Proponent:	Ste. Rose IGA
Date Approved:	March 11, 2009
Total Amount Approved:	\$500.00
Total Amount Expended:	\$500.00

A grant of \$500.00 was approved to assist with the purchase of a compactor to reduce the volume of cardboard generated at the store. The cardboard would then be shipped out for recycling. This project was subsequently withdrawn.

PROGRAM DEVELOPMENT

An allocation was approved for WRAPP Program Development in fiscal year 2008/2009.

In 2008/2009, the WRAPP Fund expended \$106,285.34 supporting the following activities:

- Product Stewardship Program and Regulation Development
- Canadian Council of Ministers of the Environment (CCME) Pollution Prevention Awards Program and Promotion
- Administration of the SDIF and WRAPP Funds
- Professional development and training
- Memberships and conferences

WATER STEWARDSHIP FUND

Managing Department:	Manitoba Water Stewardship
Date Approved:	2008/2009 Treasury Board Estimates Review Process
Total Amount Approved:	\$350,000.00
Total Amount Expended:	\$345,861.42
Summary:	

The Water Stewardship Fund (WSF) continues to be an integral program for supporting initiatives that maintain or improve the stewardship of Manitoba's water. The WSF supports research, projects and activities that further the goals of *The Water Protection Act*; and encourages the development and implementation of watershed management plans, water conservation programs and water quality initiatives to stimulate economic development and diversification that will improve the quality of life and the environment in Manitoba. Water plays a critical role in Manitoba as it supports a healthy environment and affects the economic and social well-being of all Manitobans. Manitoba is committed to preserving Manitoba's rivers, lakes and wetlands and works to promote the importance of having quality water for people, the environment and the economy.

The WSF supports projects that contribute to maintaining the quality and quantity of water, wetlands, riparian areas and aquatic habitats in Manitoba and supports projects addressing the following priority program areas: watershed management planning and implementation, water-related scientific research, education and capacity building, water conservation, water quality, and economic development. In addition, the WSF continued to support a sub-allocation of up to \$40,000.00 for the Zebra Mussel Program, as Manitoba remains vulnerable to invasion by zebra mussels and other aquatic invasive species (AIS).

WATER STEWARDSHIP FUND SUMMARY

Total Allocation for 2008/2009 Water Stewardship Fund	\$350,000.00
Applications Processed	37
Applications Approved	17
Total Amount for Grants Approved	\$312,739.22
Total Amount for Grants Expended	\$312,739.22
Zebra Mussel Program	\$33,122.20
Total - Water Stewardship Fund	\$345,861.42

A brief description of the 17 projects funded under the Water Stewardship Fund, and the Zebra Mussel Program follows:

EDUCATION AND CAPACITY BUILDING

DOWN THE DRAIN

Proponent:	École St. Avila Home and School Association
Date Approved:	February 24, 2009
Total Amount Approved:	\$19,500.00
Total Amount Expended:	\$19,500.00

A grant of \$19,500.00 was approved to develop a bioretention system to handle the treatment of storm water runoff, and address the drainage problem that has been plaguing École St. Avila and the adjoining Richmond Kings Community Centre grounds. A bioretention system will consist of a bioswale and rain garden to retain, channel and cleanse storm water runoff. An under-drain and overflow feature will channel cleansed runoff into the City's storm water system. Instead of incorporating the traditional man-made play structures onto the site, a play site that incorporates natural elements, such as logs for seating areas, blocks of limestone for climbing and fossil studies, a reclaimed wood bridge over the bioswale, and trees for shade, will be developed.

MANITOBA ENVIROTHON 2009

Proponent:	Manitoba Forestry Association
Date Approved:	February 24, 2009
Total Amount Approved:	\$4,000.00
Total Amount Expended:	\$4,000.00

A grant of \$4,000.00 was approved to support an Olympic style competition designed for high school students to help them learn about the natural environment. Team members experience the world through environmental education and hands-on activities, including current and up-to-date issues. Students study resources throughout the year and compete in the provincial event to win a chance to represent Manitoba at the North American "environmental academic Olympics" called Canon Envirothon. The competitive nature of some aspects of the program affords participants an opportunity to learn, experience, and compete provincially and internationally.

GREEN MANITOBA 2009 ECO-CALENDAR

Proponent:	Green Manitoba
Date Approved:	August 7, 2008
Total Amount Approved:	\$10,000.00
Total Amount Expended:	\$10,000.00

An allocation of \$10,000.00 was approved to support a collaborative effort aimed at producing a high-quality "eco-calendar" highlighting water, energy, and waste-related information for the benefit of the general public. The eco-calendar provides useful information, and connects users to programs and available resources around water conservation, waste minimization, and energy efficiency. The calendar was designed to help support increased awareness and education regarding environmental issues and sustainable behaviours. A total of 75,000 calendars were distributed throughout Manitoba.

INTERLAKE WATER DAYS- A CROSS CULTURAL EXCHANGE OF WATER KNOWLEDGE

Proponent:	East Interlake Conservation District
Date Approved:	August 7, 2008
Total Amount Approved:	\$6,800.00
Total Amount Expended:	\$6,800.00

A grant of \$6,800.00 was approved to undertake activities designed to foster community interest in the health and conservation of local watersheds and act as a cultural exchange between Aboriginal communities and other residents of the watershed. Events were hosted in the communities of Peguis and Gimli, which included interactive learning stations for elementary aged students, and seminar style sessions for high school students and the general public. The North Interlake Environmental Youth Corps and the Gimli Enviro-Club ran water activities, which included watershed demonstrations, critter dipping, water bingo and a water relay. The adult sessions featured speakers from Manitoba Water Stewardship, the Lake Winnipeg Stewardship Board, Manitoba Hydro, Ducks Unlimited Canada, Manitoba Habitat Heritage Corporation, the North Interlake Environmental Youth Corps, and the Peguis Women's Water. It is intended that the activities would expose the communities to water information, heighten their awareness of water issues, and provide information from different perspectives.

PEMBINA RIVER WATER STEWARDSHIP RESEARCH PROJECT

Proponent:	Nellie McClung Collegiate
Date Approved:	August 7, 2008
Total Amount Approved:	\$15,391.00
Total Amount Expended:	\$15,391.00

A grant of \$15,391.00 was approved to develop the River Watch program, designed to teach students, through their involvement in water-related scientific research and working in conjunction with Pembina Valley Conservation District, to explore various water related issues. An on-site weather station will be established to provide the opportunity for the students to study long-term trends in weather patterns and their effect on water quality and quantity. The use of alternative energy sources in the area will be encouraged through their use in providing power for components of the project. Through the collection of data, students will be involved in the development of a Watershed Management Plan for the district. Eco-environmental trades and careers will be promoted through the development of an awareness of the project. Students will work with local technicians from an early age, and will participate in internships during their senior high years through the school's Career and Technology Studies program.

SOUTHWEST MANITOBA WATER FESTIVAL

Proponent:	Turtle Mountain, West Souris River and Assiniboine Hills Conservation Districts
Date Approved:	August 7, 2008
Total Amount Approved:	\$6,500.00
Total Amount Expended:	\$6,500.00

A grant of \$6,500.00 was approved to host the fourth annual Southwest Manitoba Water Festival in Souris, Manitoba. Approximately 400 grade 5 & 6 students from 12 schools within the three conservation districts will be invited to attend the one-day event. Numerous activity stations with hands on activities will be established to create a unique and fun learning environment. The festival's primary objective is to educate children about water and various water related issues as an important step in creating stewards of the resource.

WATER CAUCUS – YEAR 5

Proponent:	Manitoba Eco-Network
Date Approved:	February 24, 2009
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

A grant of \$25,000.00 was approved to help build capacity amongst non-governmental citizen groups who work on water related issues in Manitoba, by means of education, monitoring of significant events, supporting and promoting positive public engagement opportunities, and bringing participants together in a variety of forums. In addition to ongoing capacity building activities, various activities will be undertaken, including producing more public education materials, holding workshops and conferences, and updating the Water Caucus website and database.

WATER-RELATED SCIENTIFIC RESEARCH

CONTROL OF MANITOBA POTABLE WATER DISINFECTION WITH CHLORINE DIOXIDE

Proponent:	University of Manitoba
Date Approved:	February 24, 2009
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

A grant of \$25,000.00 was approved to undertake research on alternative disinfectants which do not form significant amounts of trihalomethanes (THMs), such as chloride dioxide, chloramines and ozone. Almost all of the water systems in Manitoba use chlorine or hypochlorites for disinfection, which may give rise to the formation of THMs. Health agencies have established the link between consumption of THMs and several health problems, including cancer. North American experience with the use of chlorine dioxide as a disinfectant is extremely limited. In order to permit further use of this technology, methods for confirming disinfectant and by-product levels in drinking water are required. There is a need to establish contacts with researchers and water treatment facilities that utilize this technology elsewhere, to allow for prompt information exchange. It is expected that the results from the initial investigation will provide valuable insight and recommendations for the measurement of residual chlorine dioxide and by-products.

METHANE AND NITROUS OXIDE CYCLING IN THE RED RIVER

Proponent:	University of Winnipeg
Date Approved:	August 7, 2008
Total Amount Approved:	\$24,298.22
Total Amount Expended:	\$24,298.22

A grant of \$24,298.22 was approved to undertake research on two major greenhouse gases, methane and nitrous oxide. Contemporary estimates suggest that as much as 50 to 90% of the methane and nitrous oxide released from rivers are related to human activity. Isotope analyses can be used to constrain the sources of these greenhouse gases because the emitting sources of, and the biogeochemical process responsible for the emission of these greenhouse gases, result in isotopic signatures that are distinct with respect to natural sources. Recent technological advances now allow for the rapid and precise analysis of isotopes of atmospheric concentrations of methane and nitrous oxide. Preliminary work on the Red River suggests distinct point source producers of methane and nitrous oxide in the Red River related to anthropogenic sources. In the first phase of the research, public workshops will be conducted in the most impacted areas of Ste. Agathe, Morris, Winnipeg, etc. Research will involve transect water sampling along the entire course of the Red River, and four-season diel (24-hour) samplings which will be conducted at two predetermined, heavily impacted river sites.

NUTRIENT RETENTION CAPACITY OF DRAINED AND UNDRAINED WETLANDS

Proponent: Ducks Unlimited Canada
Date Approved: August 7, 2008
Total Amount Approved: \$25,000.00
Total Amount Expended: \$25,000.00

A grant of \$25,000.00 was approved to assess the water quality (nutrient retention) and quantity benefits of wetland retention as a beneficial management practice at a watershed scale in southern Manitoba. Sampling was initiated in winter 2008 and will be conducted over a two year period. The project will compare six natural and six drained wetlands located in cropland. As much as possible, wetlands will be selected within the same general area to ensure that topology, soil type, and land use are similar. The upland areas contributing areas to each wetland will also be determined. The project deliverable is a technical report and peer-reviewed publications on the nutrient (phosphorus and nitrogen) and sediment retention capacity of natural and drained prairie wetlands.

WASTEWATER POND SYSTEMS IN COLD CLIMATES

Proponent: Spectrum Scientific Inc.
Date Approved: August 7, 2008
Total Amount Approved: \$25,000.00
Total Amount Expended: \$25,000.00

A grant of \$25,000.00 was approved to examine the feasibility of adapting wastewater pond system technology (WPS) to Manitoba's climate. WPS is a way to treat wastewater that uses a system of ponds and algae to remove nutrients and contaminants without the need for harsh chemicals. In order for the WPS system to function year-round in Manitoba, a modified greenhouse structure will be constructed around the ponds. Once the system is established and functional, it will be monitored to determine its nutrient and pathogen removal efficiency. The system will run with regular data collection for a minimum of two years, after which it will remain in place to act as a demonstration model. The technology may be especially useful in northern regions, and if adapted to run economically for all, or part, of winter, could become an environmentally sound, low-cost alternative to current wastewater treatment practices in Manitoba.

WATER QUALITY IMPROVEMENT IN LAKE WINNIPEG THROUGH NETLEY-LIBAU MARSH

Proponent: University of Manitoba
Date Approved: February 24, 2009
Total Amount Approved: \$18,750.00
Total Amount Expended: \$18,750.00

A grant of \$18,750.00 was approved for a study to investigate plant biomass accumulation, nutrient cycling, and the concept of harvesting and removal of marsh plant biomass for the purpose of removing stored nutrients from the Netley-Libau Marsh wetland system. Long-term impacts of harvesting, plant community sustainability, biodiversity, and nutrient removal are being examined, with comparison between winter/early spring and late summer harvests. Several sites in 2009 will be in their third and fourth year of harvesting. Studying the long-term impacts of harvesting in wetlands is critical to understanding the benefits of harvesting in managed wetlands for nutrient management. The research project also intends to provide valuable information on the current state and importance of the Netley-Libau marsh.

WATER QUALITY IN LAKE MANITOBA: PHASE 2: MODELING THE SOUTH BASIN

Proponent:	Delta Marsh Field Station
Date Approved:	August 7, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

A grant of \$25,000.00 was approved for the second phase of a study focusing on nitrogen and phosphorous levels in the south basin of Lake Manitoba. The first phase of the project involved an extensive survey of water quality in the north and south basins of Lake Manitoba. The study provided basic information on spatial and temporal variation in lake water quality as a basis for evaluating the present water monitoring infrastructure, and to support subsequent water quality modeling. The second phase of the project will focus intensively on the lake's south basin, and will use data from the province's existing dataset for Lake Manitoba as well as data from the earlier phase to begin the modeling process using the QUAL2K model. Model inputs and evaluation will require field work emphasizing measurements of internal nutrient cycling (influx and outflux between sediments and overlying water), which is expected to be significant in Lake Manitoba.

WATER STEWARDSHIP

DAVIDSON DAM PROJECT

Proponent:	Ducks Unlimited Canada
Date Approved:	February 24, 2009
Total Amount Approved:	\$7,500.00
Total Amount Expended:	\$7,500.00

A grant of \$7,500.00 was approved for the reconstruction of a deteriorated dam located on a 22-acre wetland on Broughton's Creek, in the Rural Municipality (RM) of Blanshard. Broughton's Creek directly discharges into Lake Wahtopannah, the drinking water source for the Town of Rivers. The original structure was subjected to periodic heavy water flows and was replaced by a concrete weir control in 1960. The dyke slopes were reshaped in 2001. Since then, the structure has again deteriorated to the extent that an above normal runoff event could potentially wash out the dam as well as the bridge on the road located immediately downstream of the project. The project will continue to provide secure waterfowl habitat, as well as filter and trap sediments, nutrients, and pathogens, and so contribute to the ongoing stewardship of the province's water resources, particularly Lake Wahtopannah.

WATERSHED MANAGEMENT PLANNING AND IMPLEMENTATION

GRASSMERE CREEK WATERSHED: SURFACE WATER MANAGEMENT PLAN

Proponent:	East Interlake Conservation District
Date Approved:	August 7, 2008
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

A grant of \$25,000.00 was approved to undertake preparation of a surface water management plan that will outline priority areas for the watershed, address economic issues in conjunction with water quality/quantity concerns, fisheries health, and the overall ecological integrity of the watershed. A policy document designed to direct future public works projects in the region will be created. This document will outline the priority areas for the watershed and will ensure an integrated approach to surface water management will be maintained in future years.

ROSEDALE DRAIN ESCARPMENT EROSION CONTROL

Proponent:	Turtle River Watershed Conservation District
Date Approved:	February 24, 2009
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

A grant of \$25,000.00 was approved to support erosion control projects, including the construction of rock weirs and riparian enhancement, to alleviate bank erosion on numerous creeks within the escarpment of Riding Mountain. Historically, streams within the Turtle River Watershed Conservation District originating in the escarpment deposited shale among the sub-escarpment, forming alluvial fans. To increase the agricultural production of these boggy, wet areas, many of these escarpment streams were connected to downstream agricultural drains. The result has been a drastic increase in erosion of the escarpment as the hydraulic energy of the streams became concentrated in a narrow channel rather than being dispersed over a natural alluvial fan. The sediments are carried further downstream and deposited in drains and lakes, causing a series of problems. To date, over 90 erosion control structures have been constructed. These structures have helped to reduce costly downstream drain clean-outs. Erosion has been reduced and the build-up of silt and shale in highly eroded areas has helped restore the creeks to their natural state.

ECONOMIC DEVELOPMENT

RIPARIAN CONSERVATION AGREEMENT PROGRAM

Proponent:	Whitemud Watershed Conservation District
Date Approved:	February 24, 2009
Total Amount Approved:	\$25,000.00
Total Amount Expended:	\$25,000.00

A grant of \$25,000.00 was approved to identify and delineate vulnerable and fragile riparian areas within the Conservation District, and work to achieve conservation agreements with land owners for identified riparian areas. Working in partnership with Manitoba Habitat Heritage Corporation (MHHC), the Conservation District will identify fragile riparian areas on ortho-photos using Geographic Information System technology, and will enter into an agreement with landowners. The agreement identifies the area that is protected in perpetuity under the Conservation Agreements Act. The landowner is entitled to monetary compensation for the land-use restrictions placed on the property. MHHC has committed to monitor the properties to ensure the integrity of the agreements.

Zebra Mussel Program

Zebra mussels are small clam-like organisms that are not native to North America. They were discovered in Lake St. Claire in 1988. It is generally believed that they were transported to North America in the ballast water of an ocean going vessel and that this ballast water was then discharged into the Great Lakes system around 1986. Zebra mussels have spread quickly to all of the Great Lakes, the St. Lawrence and Ottawa rivers, Trent-Severn and Rideau Canal systems, Mississippi River from St. Paul Minnesota to the Gulf of Mexico delta including its major tributaries. More recently, zebra mussels have been found in the Missouri River at Sioux City, Iowa.

Manitoba remains vulnerable to invasion by zebra mussels and other aquatic invasive species (AIS). Although not presently found in Manitoba waters, this costly foreign species is close to Manitoba's watershed boundaries. Trailered watercraft is recognized as a key vector of zebra mussel dispersion by North American agencies responsible for AIS prevention and management. Movement of zebra mussels from infected bodies of water to other, isolated bodies of water is due

to accidental transport on water-based equipment including boats, trailers, motors, as well as in live wells and bait buckets.

Water quality data indicate that numerous lakes and rivers in Manitoba would support populations of zebra mussels. Trailered watercraft with attached zebra mussels has resulted in dispersion to unconnected or isolated bodies of water throughout Michigan, Wisconsin, southern Ontario and, to Brainerd Lakes, Minnesota. The likely route of entry into Manitoba is by accidental introduction from trailered recreational watercraft originating from the Great Lakes area of Ontario and from northeast and central US. The Manitoba/US border offers a convenient inspection location of recreational watercraft trailered from US locations. The international border crossings also offer an opportunity for visiting fishers and recreational boaters to be informed and surveyed about zebra mussels and other AIS.

Goal and Objectives:

To prevent accidental introduction of zebra mussels and other aquatic invasive species (AIS) into Manitoba by visitors transporting water-based equipment across Manitoba's borders, and to heighten public awareness to the issues of zebra mussels and other AIS in Manitoba. The goal will be achieved by the following objectives:

1. To inspect and survey visitors transporting water-based equipment at various international border crossings in eastern Manitoba. Whiteshell Provincial Park is also a popular recreational destination for visitors. As such, inspections of boats and trailers will be conducted where practical (boat launches, Travel Manitoba Info Centre, etc.)
2. To provide literature (brochure and gift of appreciation) to boating visitors about how to prevent accidental introduction of zebra mussels into Manitoba.
3. To supply information to appropriate Manitoba Government regional offices (brochures, fact sheets, boat-ramp signage) for distribution and posting.
4. Target the boating audience with the clear message of preventing accidental zebra mussel introduction into Manitoba.
5. To employ students under the Student Temporary Employment Program (STEP).

Program Results 2008/2009:

Each year Manitoba Water Stewardship initiates an Aquatic Invasive Species inspection program to inspect water-based equipment at popular recreational areas. During the summer of 2008, over 1,400 inspections of water-based equipment (trailers, boats) were conducted; 125 boaters trailering equipment were interviewed; and aquatic invasive species information was provided to participants of 19 fishing derbies.

BEAR SMART INITIATIVE

Managing Department:	Manitoba Conservation, Wildlife and Ecosystem Protection Branch
Date Approved:	2008/2009 Estimates Review Process
Total Amount Approved:	\$125,000.00
Total Amount Expended:	\$109,095.04

Summary:

The *Bear Smart* Initiative continued to support activities and programming that shifts the focus away from reactive resolution of conflicts with bears to proactive prevention. By practicing *Bear Smart* principles, the key being eliminating and/or securing of all attractants, bears learn to not associate people and dwellings with food. These actions are expected to enhance public safety, reduce property damage, lessen the frequency of human-black bear encounters and maximize resource efficiency.

As cottage and acreage development expands into bear habitat and bears re-occupy abandoned farmland, the frequency and intensity of negative human-bear interactions is expected to increase. Black bears sometimes cause damage to property, apiaries, leafcutter bees, crops, livestock, and private property. On rare occasions, they may also be a threat to human safety in areas such as parks, campgrounds, cottage developments, in and around communities, rural sub-divisions and remote areas. Minimizing conflict between humans and bears will result in fewer bears needlessly being destroyed as problem bears.

An estimated 27,000 to 33,000 black bears live in Manitoba. The population continues to be stable in most non-agricultural areas. However, in some agro-fringe areas, the population is increasing. The variability in human-bear conflict is largely influenced by density and recruitment of bears in response to natural food availability, along with the level of bear presence and nuisance activity that the public is willing to tolerate.

Over 940 problem black bear occurrences were reported last year to Manitoba Conservation district offices. Of these, 689 were investigated and 160 (23.2%) were associated with recreational areas, 219 (31.7%) rural agricultural areas, 285 (41.3%) rural residential areas, and 15 (2.1%) urban areas.

***Bear Smart* Initiative priorities include:**

- education and awareness through public outreach programming, including highway, traffic and pedestrian signs, posters, handout materials, newspaper ads, website and community workshops;
- identification of effective strategies to encourage *Bear Smart* behaviour over the long-term;
- showcasing positive outcomes to Manitoba communities, including the installation of necessary infrastructure for bear-proofing initiatives; and
- implementing bear-proofing initiatives in provincial parks.

Program Results 2008/2009:

- Advertisements and printing of promotional and educational materials: Two advertisements were published in newspapers throughout the province to remind people on ways to reduce bear-human conflicts during the summer and the time of the year when bears were preparing for hibernation.
- "Bear Smart" workshops were provided by Parks and Natural Areas Branch interpreters who collectively delivered 70 individual presentations to 3,020 park visitors in the following Provincial Parks: Birds Hill, Grand Beach, Grindstone-Hecla Island, Paint Lake, St. Malo, Whiteshell-Rennie and Whiteshell-Nutimik Lake.
- *Bear Smart* display was exhibited at the Brandon Royal Winter Fair, Ag Days in Brandon with over 2,000 individual contacts made about being "Bear Smart".

- Several "Bear Smart Kits" containing various items for use when in bear country were developed. Each Kit contained: Be Bear Smart, Protect Yourself – Protect our Wildlife booklet, banger launchers and projectiles, bear spray, extreme rattler, critter getter "warning system" and other sounding devices (siren), a fixed blade knife and a video "Living in Bear Country." Kits were made available to Regional staff and others for demonstration purposes.
- Copies of three videos were distributed to Manitoba Conservation District offices in the Northwest region: Living in Bear Country, Working in Bear Country and Staying Safe in Bear Country.
- Replicas of black bear and polar bear skulls were purchased for use at public displays. These items plus tanned bear hides (black and polar bear) were extremely popular items with the public where the "Be Bear Smart" display was showcased.
- A student was employed to assist with data entry for each occurrence involving bears, as well as assisting with Bear Smart workshops and public education and outreach, which assisted in measuring outcomes of the various messages and initiatives undertaken. Preliminary results of the data analysis shows that of the total 940 Black Bear District Occurrence Reports (DORs), 689 were investigated by staff. Of those investigated, 44.4 percent for Recreational areas, 49.3 percent for Rural Agriculture areas and 54.7 percent for Rural Residential areas involved bears eating bird seed, garbage and compost for an overall total of 48.6 percent. These human-bear encounters could have been avoided through adopting Bear Smart procedures.
- A Bear Smart Waste Management initiative was undertaken for Grand Beach Provincial Park that involved changing the traditional waste collection bins with a semi-automated bear-proof containment bins and collection system. Twenty-four bear-proof waste bins will be installed at seven drop-off locations and a truck retrofitted to be able to pick-up the bins. A brochure entitled "Be Bear Smart with Your Garbage" and two feature signs were developed to inform the public and cottage owners about the semi-automated system and to inform visitors to the park about being Bear Smart in bear country.

MANITOBA FORESTRY ASSOCIATION WOODLOT PROGRAM

Managing Department:	Manitoba Conservation, Forestry Branch
Date Approved:	2008/2009 Treasury Board Estimates Review Process
Total Amount Approved:	\$200,000.00
Total Amount Expended:	\$200,000.00

Summary:

In the 2008/2009 Estimates Review, Treasury Board approved a Broad Allocation of \$200,000.00 under the Sustainable Development Innovations Fund to support the operations of the Manitoba Forestry Association's Woodlot Program.

The Woodlot Program continues to be delivered through the Manitoba Forestry Association (MFA) and has been effective in delivering services to private landowners in the Southeast, Interlake and Red River Valley regions of the province with an expanded presence in the Swan River Valley and surrounding area. Technical services and woodlot management plans continue to be provided to landowners through the assistance of a contract employee and speaking engagements are being provided to promote the Woodlot Program. Woodlot program staff work with representatives of Manitoba Agriculture, Food and Rural Initiatives, Manitoba Conservation, Town of Swan River, Rural Municipality of Swan River, surrounding municipalities and conservation districts, private landowners, and loggers in the area.

The objectives of the Woodlot Program are to promote land stewardship, and to help landowners realize the potential of their wooded property in meeting their personal goals. The program continues to change to better serve the target audiences in the region and to better address issues landowners are facing.

Program Results 2008/2009

MFA's Woodlot Program continues to be popular and in high demand. Training seminars were held and staff continued to work with Conservation Districts and rural municipalities to deliver the message, showcase successful landowners who have conducted sustainable woodlot management activities and introduced field days and bus tours. At the end of FY 2008/2009, 20 landowners were on a waiting list for a management plan and a number of appointments were booked for walk 'n talks with interested landowners. Woodlot management objectives vary between landowners as they manage their woodlots for environmental benefits, timber and non-timber forest products. Small scale salvage harvesting of dead and dying larch is becoming more frequent as the eastern larch beetle continues to cause mortality in larch stands on private land.

Thirty-five return visits to management plan participants show the continued interest of landowners involved in sustainable woodlot management. These return visits have now become an integral part of the Manitoba Woodlot Program.

The program continues to promote sustainable woodlot management opportunities available to landowners across Manitoba. Through newsletters, field days, bus tours, seminars and general word of mouth, the program continues to help rural Manitobans manage their woodlots for economic, environmental and social benefits.

Woodlot Program Components

Components of the Woodlot Program include management plans, return visits, public education/extension, and partnerships. Achievements for 2008/2009 include:

1. Management Plans

The first component of the Woodlot program is an initial "onsite" visit that is offered to the landowner. Following the visit, a detailed Woodlot Management Plan based on the specific topics or objectives discussed during a "walk and talk" is prepared. The plan, inclusive of recommendations to be carried out is presented to the landowner.

A total of 46 woodlot management plans were completed. Of these, 12 were conducted in the expanded area of the Swan River Valley. Since 1992, 1,187 management plans have been completed on 56,210.15 forested acres throughout 57 municipalities across Manitoba.

2. Return Visits

The second component of the Woodlot Program is the return visit. A return visit complements the written woodlot management plan provided to the landowner and provides assistance to the landowner who wishes to proceed with timber harvesting, which may also include marketing assistance (Operational Return Visit) or has completed initial recommendations contained in the management plan and may want to carry out additional work in the woodlot (Technical Return Visit).

The demand for aspen continues to be poor and therefore, landowners in eastern Manitoba have not been as actively involved in small-scale timber harvests from their woodlots for economic benefits. Consequently, landowners involved in harvesting fuel wood for personal use and local sale have increased. In addition, the Eastern Larch Beetle has caused extensive mortality of large stands of larch; therefore, much of this larch is being salvaged for fuel wood purposes.

Many landowners involved in fuel wood harvesting activities received operational return visits. The estimated volume of saw logs/pulp/firewood from these activities is 1,595 m3 of hardwood and 3,620 m3 of softwood. The percentage of landowner interest in management activities and production of specialty products from private land includes:

- a) 22.0% - Traditional Tree Harvesting for Income, which includes harvesting for: the sale of saw logs and pulpwood; value-added products such as planing, kiln drying and grading lumber for market within the community; lumber for on site building materials, and firewood.
- b) 8.0% - Non-Traditional Forest Products, which includes Manitoba maple syrup, mushroom production, jams and jellies; Christmas trees and hybrid poplars for pulpwood; saw logs and future carbon sequestering benefits.
- c) 70.0% - Environmental Benefits, which includes recreation (e.g. trail construction for snowmobiling, bird watching, hiking and skiing); wildlife enhancement; eco-tourism; and tree planting (over 3.75 million seedlings planted by woodlot owners).

3. Public Education/Extension

The third component of the Woodlot Program includes public education/extension activities, which includes a variety of other woodlot activities such as education seminars, evening seminars, skills development seminars, bus tours, workshops and field days, as well as programming with groups and agencies supportive of woodlot management practices. The following were held:

- "Woodlot Series" included general woodlot management, Manitoba maple syrup, specialty mushrooms, and other non-timber forest products.
- Best Management Practices Seminars.
- 'Woodlot Field Day'- Demonstrations included small scale logging equipment, portable sawmill operation, chainsaw care and maintenance and other woodlot related demonstrations.
- In partnership with the Swan Lake Conservation District and Swan Valley Regional Secondary School, held a "What's Wrong with My Tree" insect and disease seminar in Swan River in June, 2008.
- In partnership with the Manitoba Model Forest, Woodlot Association of Manitoba and the South Interlake School Division, held the "Lakes, Rock and Trees" Bus Tour in July 2008 and "Gallery in the Park" bus tour in August 2008.
- Assisted with organizing the Manitoba Christmas Tree Growers Association Annual Meeting at Cloverleaf Farms in July 2008 and delivered a report of the 2008 Woodlot Program activities at the Woodlot Association of Manitoba Annual General Meeting in Winnipeg on March 2009.

- Distributed over 120,000 seedling trees to approximately 150 landowners during the sixth annual "A Day in the Pines" and Sandilands Forest Centre tour in May 2008.
- Presentations were provided on proper tree planting for landowners, safe chainsaw use, insects and diseases of the woodlot, industrial tree planting, and basics of sawmilling and proper tree pruning.

4. Partnerships

- Assiniboine Community College to improve woodlot database and provide a more useful tool for the Woodlot staff.
- Manitoba Christmas Tree Growers Association and Woodlot Association of Manitoba to deliver various woodlot related initiatives on behalf of the Woodlot Program. The Manitoba Christmas Tree Growers Association produced two issues of the "Knottie Times" newsletter during 2008/2009 that contained articles on evolving trends of Christmas tree markets, building and managing your Christmas tree business, and insects and diseases affecting plantations. The Woodlot Association of Manitoba produced six issues of "The Manitoba Woodlot" newsletter during 2008/2009 that included a variety of topics of interest to landowners.

**APPENDIX I -
Five Year Project Summary**

**Sustainable Development Innovations Fund
Five Year Expenditure Summary (\$000)
For years ending March 31, 2004 - March 31, 2009**

APPROPRIATION	Actual/Adjusted Expenditures				
	2004/05	2005/06	2006/07	2007/08	2008/09
Sustainable Development Innovations Fund	2,969.1	3,754.7	3,266.9	3,370.1	3,390.2
Total	2,969.1	3,754.7	3,266.9	3,370.1	3,390.2



